The RUBBER AGE

225 Fourth Avenue, New York

VOL. XIX MAY 10, 1926 No. 3

BRITISH COLONIAL OFFICE ANNOUNCES NEW PLAN TO RESTRICT PRODUCTION

If Crude Rubber Falls Below an Average Price of 42 Cents a Pound in Present Restriction Quarter, Exports will be Limited to 80 P. C. of Standard Production

The British Colonial Office announced April 24 that should crude rubber prices fall below an average price of 21 pence (42 cents) in the present quarter, a new method of output restriction will go into effect in the next restriction quarter, beginning August 1. The original Stevenson Plan was only aimed to keep the price over 15 pence.

It was also stated in the official announcement that the percentage of standard production of crude rubber which may be exported at minimum rate of duty from Ceylon and Malaya during the three months of the present restriction quarter shall be 100. The maximum limit of 500 lbs. an acre, provided under the regulations applicable to the assessment of estates of more than 25 acres in Malaya, is to be abolished in the present quarter. (The present quarter began May 1.)

The new scheme further provides that the maximum limit for the assessment of standard production in the case of small holdings will be raised to 500 lbs. an acre for mature rubber and 200 lbs. an acre for rubber in bearings but not mature.

United States Representative Black of New York, in commenting upon the new plan, made the following statement in Washington April 26:

"On April 24 the British Colonial Office announced that if spot rubber went down to an average of 21 cents a pound in May, June and July, the plantations would be restricted to 80 per cent of the present output," said Mr. Black.

"At the time of the Stevenson restriction scheme the British Colonial Office said that 36 cents a pound was a fair price for rubber. At present spot rubber is running from 10 cents to 14 cents above this price. During the restriction scheme the British planters made millions, when rubber ran as high as $1 a pound.

"These prices should be considered by the British Colonial Office against the problematical 21 cents price as an offset. It is highly unfair for the British Government to jack up the price again. The plantations have more than recouped their old losses, and should let the market take its course.

"The restriction scheme was only a recoupment proposition — the proposed scheme is an out-and-out gouge. It is ordered without discussion or rebate, and has not the excuse back of it that the Stevenson plan had.

"The State and Commerce Departments should make stringent protests against it. The British Government threw off the restriction scheme, regardless of Secretary Hoover, and now will probably take this action without regard for him."

The United States Department of Commerce again took up the campaign started by Secretary Herbert Hoover, following the British announcement. It was declared that motorists had reduced consumption of tires about 25 per cent as a result of this campaign and that the new effort on the part of the British Colonial Office to increase the cost of rubber would be met by further conservation.

Statement Issued in Washington

A statement issued in Washington read: "The continued price-fixing of rubber by the British Colonial authorities under the revision of the Stevenson act as announced in the press will simply mean continued conservation in the use of rubber by American consumers, who use 70 per cent of the world's consumption, and more activity in reclamation of used rubber and in securing our own sources of supply."

Continuance of the Stevenson program will "stimulate production of rubber in other parts of the world," the statement continued, "and will assure the continued effort of the American people to secure American controlled supplies of rubber. Early in December the American Automobile Association, the National Automobile Chamber of Commerce and the Rubber Association of America with the support of the Department of Commerce, undertook the rubber conservation campaign as the result of artificial control having raised prices to over $1 per

(Continued on Page 80)

CONTENTS

NEWS SECTION

Announce Restriction Plan 79
Seek Better Reclaim 80
Goodrich Studying Mills 81
Giant to Enlarge Plant 82
March Exports High 83
Goodyear Announces Changes ..84
Acquires Scoring Factory 85
To Enlarge Fabric Mill 86
E. C. Shaw Retires 87
Other News Items - Pages 88 to 97

FEATURES

Artistic Applications 99
A Lost Process 100
New Tractor is Rubber Shod .101
Russian Rubber Industry 102
A Deviation from Poiseuille ..103
Dubosc Series 104

MARKETS

Cottons and Fabrics 108
Crude Rubber 110
Chemicals 112

Published on the 10th and 25th of each month by Gardner Publishing Co., 225 Fourth Ave., N. Y. C. and Highland, N. Y. Address correspondence to N. Y. office. Subscription rates: Domestic, $2.00; Canada, $2.50; Foreign, $3.00. Single Copies, 10c.

Entered as Second Class Matter June 10, 1920, at the Post Office at Highland, N. Y. under Act of March 3, 1879.

Copyrighted, 1926, by Gardner Publishing Co.

Forms close 10 days before publication.

SAYS AMAZON VALLEY SEEKS U. S. CAPITAL

Business men in the rubber districts of South America are anxious to interest United States capitalists in growing cultivated rubber, according to C. I. Bruner, Akron banker, who recently returned from a ten-week trip to the southern continent.

"We stopped for a few hours at Lapaz, Peru, which is on the edge of the rubber district," said Mr. Bruner. "Word got about some way that we were from Akron, so we were entertained by a club something similar to our Chamber of Commerce. They believe down there that rubber superior to that grown in Sumatra and Ceylon can be produced in the Amazon valley. But they have not the money to back such a venture.

"The only difficulty would be transportation. There is a government-owned railroad, but the rubber district is a thousand miles and more from the ocean. Transportation costs might make the cultivation of rubber impracticable.

"We were particularly struck by the absence of manufacturing in South America. There is a fairly well developed shoe industry in Buenos Aires, and Rio Grande del Sol of Brazil is a manufacturing center, but those are about the only two. They are forced to import practically all of their commodities, and that is what makes the cost of living high."

COLONIAL OFFICE HAS NEW RESTRICTION PLAN

(Continued from Page 79)

pound against a production cost of less than 20c per pound. We now have accurate figures as to the result of this campaign through surveys of production and stocks made by the Rubber Association of America and the Department of Commerce.

"These figures show that automobile users reduced their consumption of tires almost exactly 25 per cent below the same period a year ago, and this despite the increase of nearly 3,000,000 in the number of automobiles running. The tire consumption since the campaign started, as compared to the preceding four months, shows a reduction of 35 per cent, only part of which is attributable to the seasonal factor. Unofficial statistics show further that the use of tire repair materials has had a very large increase over the same period of a year ago."

Important—Watch next issue for special announcement of the new and greater RUBBER AGE.

Seek Better Reclaim

Possible means of supplementing the natural supply of rubber may be developed from a new series of investigations undertaken by the Bureau of Standards, Department of Commerce, which announced in its technical news bulletin issued April 17 that its studies will include such problems as the improvement of the quality of reclaimed rubber, the possibilities of synthetic rubber or rubber-like substances and other subjects.

For the present, it is stated, it is proposed to investigate the value of water dispersions as a means of reclaiming the quality of reclaimed rubbers of rubber-like materials.

To Sell Stadelman Land

"Ridgecrest," estate of the late G. M. Stadelman, deceased president of Goodyear Tire & Rubber Co., Akron, is to be divided up into lots and sold. The property, located in Akron's most exclusive district, will be sub-divided in accordance with plans which Mr. Stadelman drew prior to his death. It was purchased originally for the site of the Stadelman home.

Vulcanizing Press Patented

Richard J. Schmidt, Akron, assignor to the Akron Equipment Co., Akron, was recently granted U. S. Patent No. 1,581,090 on a vulcanizing press. The machine combines a stationary platen, a ram and a movable platen carried thereby; a mold section carried by each platen; and a plurality of posts carried by one of the platens. These posts are adapted to project through the other platen. A plurality of keys are movable into locking engagement with the posts to secure the platens together.

Coming -

An Important Announcement

about the new and greater

RUBBER AGE

See Our Next Issue

Converse Assigned Patent

Hugh Bullock, who was recently granted U. S. Patent No. 1,581,783 on a shoe, has assigned the patent to the Converse Rubber Shoe Co., Malden, Mass. The shoe has an upper of woven material with substantially vertical and horizontal threads, a back-stay and front stays provided with a series of fastening means.

The top of the upper adjacent to the front stays is substantially in the same horizontal plane as the top of the upper adjacent the rear stay. Opposite sides of the upper provided with cut-out portions, which have their greatest depth extending below the horizontal threads of the material, exert a bias pull upon the portion of the back stay below its upper edge.

Cobb Writes for Goodrich

Irvin S. Cobb, inimitable humorist, has written a brief essay on motoring manners and has labeled it "Much Obliged." The booklet, in a half-serious, half-humorous style tells what is needed to make motoring a safer and pleasanter occupation. Various points are illustrated by Tony Sarg. The book is being printed and distributed by the B. F. Goodrich Rubber Co. as part of its campaign to promote better road conditions.

CATALPO!

Heavy Calcined Carbonate **MAGNESIA** Light and Extra Light

Stocks Carried in Akron by

THE C. P. HALL COMPANY

118 Central Savings & Trust Bldg., *Akron, Ohio*

Sales Agent For

GENERAL MAGNESITE AND MAGNESIA COMPANY

2960 East Venango St., Philadelphia.

GOODRICH OFFICIALS ARE MAKING AN EXTENSIVE STUDY OF TEXTILE MILLS

Bertram G. Work, Accompanied by Other Executives, Visits Many Textile Mills in Southern States—Manufacture of Tire Fabrics not Contemplated by Goodrich

Although not contemplating any immediate change in the Goodrich policy concerning the manufacture of tire yarns and fabrics, Bertram G. Work, president of the B. F. Goodrich Co., Akron, recently made an extensive tour of southern states, with a view to studying conditions in the cotton textile industry. Mr. Work was accompanied by several Goodrich officials and two prominent Georgians familiar with the cotton industry.

The Goodrich company purchases immense quantities of cotton fabric from mills in Georgia, and in the last few years purchases are said to have increased to a point where approximately $15,000,000 a year is spent by the company with Georgia mills.

Mr. Work told representatives of the press that he had been anxious to visit southern cotton zones and meet mill men, leaders and others engaged in the production of cotton textiles in the South. The trip was his first to the South in 25 years.

In denying rumors current in some circles that the B. F. Goodrich Co. contemplated assuming control of certain mills in Georgia, Mr. Work explained his mission as follows:

Mr. Work Explains Mission

"Please understand that the B. F. Goodrich Co. has steadily maintained a policy of separation from the control and production of this type of raw material. Please also understand that we are not making this trip with the definite object of altering that policy. We are taking a look; making a little tour of inspection, a sort of survey—and naturally when such proposals come up in the future, we'll know better what to say to them."

When it became known that Mr. Work and other Goodrich officials were in Georgia, rumors sprang up that the company would probably follow the policy of other large rubber manufacturers and go into fabric production.

Mr. Work spent April 12 and part of the next day in Atlanta, Ga., and then went to Chattanooga, Tenn., where he was met by Harry Hough, vice president and comptroller of the Goodrich company; Lorenzo D. Brown, vice president and treasurer; F. C. Van Cleef, secretary; and T. G. Graham, general superintendent of the tire division. The party was completed by two cotton mill men and W. C. Arthur, Mr. Work's secretary.

Visits to Dalton, Cedartown, Rome and other points in north Georgia were made, and it was intimated that visits would be made to mills in Alabama and adjoining states before the party returned to Akron. Nothing definite was disclosed concerning the findings of the survey or the duration of the tour.

Important—Watch next issue for special announcement of the new and greater RUBBER AGE.

FABRIC MILL REPORT DENIED BY GOODRICH

Akron officials of the B. F. Goodrich Co. on April 28 denied a report that the company has signed a contract with R. E. Hightower, Sr., head of a group of textile mills at Thomaston, Ga., for the purchase of one or more of these mills. It was admitted that negotiations are under way with textile mill owners in the southern states, but said nothing definite had been accomplished. The report denied was published in the *Atlanta Journal* and aroused much comment.

It was also reported that a contract for $100,000,000 worth of cord tire fabric had been signed by the Goodrich company and the Fisk Rubber Co. with the Hightower interests.

PERFECTION MADE IN U.S.A. BOSTON WOVEN HOSE & RUBBER CO.

UNITED STATES RUBBER COMPANY RAINBOW AIR HOSE

NEW YORK BELTING MADE INDESTRUCTIBLE IN U.S.A. PACKING CO.

Now it can be done—
Rubber Labels in Colors!

These new patented all-rubber brands were developed by the Naugatuck Chemical Company to meet a long felt want on the part of rubber goods manufacturers of a trademark in colors.

Your sales and advertising departments will readily appreciate the added attention value gained by reproducing your or your customers' trademarks in colors.

During 1925 three million were used on many types of rubber goods—belting, hose, tires, clothing, mats, and other articles—each portraying in an attractive manner the mark of a reputable manufacturer.

All-rubber labels can be furnished in any color combination and are shipped cut out ready for application.

We invite inquiries from rubber goods manufacturers for samples, prices, and method of application. Every assistance will be given in working out your designs and color schemes.

THE NAUGATUCK CHEMICAL CO.

1790 Broadway THE NAUGATUCK CHEMICAL COMPANY New York City

GIANT TO ENLARGE ITS PLANT TO FILL NEEDS

According to C. E. Hart, President of the Giant Tire & Rubber Co., Findlay, Ohio, the company expects 1926 to be the biggest in its history and to cope with the increase in tire sales, plans are being made for the immediate construction of additional factory and office space.

Although early spring is usually a quiet season of the tire industry, factory officials have been forced to bring the daily output to 1064 tires in the last few weeks as the result of orders from all over the country.

Factory officials are planning to begin work within the next two weeks on a two-story addition to the office, which will measure 20 by 40 feet ground floor space. The addition is made necessary, Mr. Hart said, to relieve the conjested condition of the present office quarters.

To Provide Greater Facilities

Mr. Hart said that plans were also being made for the immediate construction of a building between the two large factory rooms now in use to be occupied by the tire building department and also as a storage room.

The additional factory building will furnish 3500 square feet additional floor space. The work will be started shortly.

The Giant Tire & Rubber Company has been in opration in Findlay for more than nine years. The business dates back to its organization in Akron in 1915. Soon after incorporated, the company moved its factory to Findlay. Besides the Giant tire, the company makes the Belmore tire and several special brands.

The output of the company in the past few years has averaged between 700 and 800 tires daily. A year ago the output averaged between 600 and 700 tires.

The company's present output has not yet reached the sales demand, the president said. So far this year the sales are 90 per cent more than the sales of the first three months of 1925, while the output is not quite 75 per cent higher than a year ago.

The company now employs 180 men in the factory departments, and about 25 in the office. The force is being steadily increased in both the office and factory.

Corduroy Pays Dividend

Directors of the Corduroy Tire Co., Grand Rapids, Mich., recently announced that checks covering the fifth consecutive dividend on common stock were mailed April 15. Preferred stock dividends have been paid quarterly without exception since October, 1921.

In the four and one-half years since the organization of the Corduroy company, it has paid out more than $600,000 in dividends, the announcement stated. The company started operations July 1, 1921, and in October of the same year paid its first dividend. Some time later accumulated preferred stock dividends were paid in full. Original capitalization of $1,000,000 was later increased to $3,000,000.

I. R. I. to Form New Section

The British Institution of the Rubber Industry is about to form a salesmen's and advertising section, and for this purpose has called a meeting in London at which Colonel J. Sealy Clarke (chairman of the Council) will preside. The meeting will be addressed by H. F. Trevillion and A. H. Isaac. Those present will be called upon to offer suggestions regarding the proposed section.

Important—Watch next issue for special announcement of the new and greater RUBBER AGE.

MATERIALS RELEASED FROM MURRAY FACTORY

Crude rubber and other materials supplied to the Murray Rubber Co., Trenton, N. J., to be used in the manufacture of tires for Sears, Roebuck & Co., Chicago, were recently shipped from the Murray plant without protest, despite the suit recently filed against Sears, Roebuck by Murray in U. S. District Court in Trenton.

According to the *Trenton Times*, before Sheriff Reichert permitted the release of the materials, he required the filing of a $500,000 bond by Sears, Roebuck & Co. It had been thought that a similar bond might be filed by the Murray Rubber Co. to block the replevin action. However, several freight cars were loaded April 15 and the remainder of the crude rubber was released the next day. In all, about 200,000 pounds of crude rubber, 10,500 automobile tires and 1,100 tubes were transferred from the Murray plant.

The Murray Rubber Co. suit was started April 9, when papers alleging a breach of contract were filed in the U. S. District Court in Trenton. The allegations of the Murray company were that the contract would not be completed for two years. The $4,927,161 asked represents the estimated sum which the Murray Rubber Co. claims in the papers was lost by the alleged breach of contract.

Form Crestline Rubber Co.

The Crestline Rubber Co., Mansfield, Ohio, was recently incorporated with an authorized capital of $25,000. Incorporators are C. H. Mansfield, L. E. Mansfield, H. C. Mansfield, Laura Mansfield and C. C. Sherick. The company plans to manufacture light rubber goods and novelties.

CLYDE E. LOWE CO.

2976 East 81st. St. Cleveland, Ohio

MANUFACTURERS OF

CIRCULAR INNER TUBE MANDRELS

AND

ECONOMY CALENDER SHELLS

Prompt Service *Let Us Quote You*

GUAYULE RUBBER

"DURO" Brand Washed and Dried Ready for Compounding

A comparatively small percentage in a compound will make a stock run smoother on calenders and tubing machines, without depreciating the quality

ESPECIALLY USEFUL IN FRICTIONS

CONTINENTAL RUBBER COMPANY OF NEW YORK

120 Broadway
New York

MARCH EXPORTS OF RUBBER GOODS LARGEST OF ANY MONTH SINCE 1920

Total Shipments for Month Valued at $5,696,413, Compared to $4,911,404 in February—New High Record Also Established by Accessories and Solid Tires

According to the Rubber Division, Department of Commerce, March exports of rubber goods were valued at $5,696,413, the highest for any month since 1920. The figures compare very favorably with those of $4,911,404 for February, 1926, although the volume of shipments was lower.

Among the important factors contributing to this high total were higher prices for automobile casings, rubber belting, rubber packing and rubber thread. There was also a record volume of business in rubber hose, solid tires for trucks, and tire repair materials, and there were heavy shipments of belting, packing and canvas rubber-soled shoes.

Offsetting this to some extent, the volume of trade in automobile casings and inner tubes was below normal for this time of the year, the value per pound of exports of scrap and reclaimed rubber fell off sharply and the trade in rubber toys and balloons continued dull. Trade in rubber footwear and specialities other than toys was about normal.

The March trade in tires and tubes was marked by several notable features —a new high record in the exports of automobile solid tires and in tire accessories and repair materials, and a new high unit value of $18.88 per automobile casing, as compared to slightly less than $16.00 per casing for previous months since November, 1925.

14,044 *Casings Exported*

March has placed in the export records a mark of 14,044 tires, breaking the previous record of March, 1924, when 11,247 solid tires were exported, and of May, the record month of 1924, when 11,204 tires were sent abroad. The unit value of solid tire exports declined to $30.47 in March as compared with the February value per tire of $35.40.

Tire accessories and repair materials were exported to a value of $177,336. This was over $100,000 higher than the exports of March a year ago, while there was substantial increase over February, 1926, figures. The exports of pneumatic automobile casings in March totaled 129,232 valued at $2,439,322.

The volume of shipments in March was lower than in February, while usually March shipments show a heavy seasonal increase. Argentine was the principal market, taking 23,680 casings, worth $399,490. Brazil, the next market, took 10,005 casings, valued at $124,808. Australia, the United Kingdom and Cuba took smaller numbers, but were important markets.

Argentina and Brazil were also the leading automobile tube markets, and were followed in order of importance by Mexico and Japan. The big markets for tire accessories and repair materials were Australia, Canada, the United Kingdom, Argentina and British South Africa.

Important shipments of solid automobile tires were made to five markets: Argentina, 3,192 tires; United Kingdom, 2,530; Japan, including Chosen, 1,525; Australia, 1,406; and Cuba, 1,067 tires. Values were respectively, $52,711, $68,943, $37,131, $71,231 and $36,327.

British India was the outstanding market for other solid rubber tires, taking 67,694 pounds, valued at $23,341.

CATALPO!

SERVICE *without* COMPETITION

Our *sole* business is to supply you with Reclaimed Rubber of the highest quality at the lowest volume cost—it is no side line with us!

Our complete output is for the exclusive use of our customers—*none* is used by us. *All* of our production is shipped direct to outside rubber factories.

These factories cannot depend on surplus lots of Reclaimed. They must have a steady supply of the same uniform quality year in and year out.

To meet this demand we have substantially increased our facilities—providing a constant, reliable supply of our standard grades, such as

BISON SUPER-RECLAIM
BLACK DIAMOND
BUFFALO

WE DO NOT COMPETE WITH YOU — WE SERVE YOU

U.S. RUBBER RECLAIMING CO. Inc.
100 East 42 St. N.Y. BISON Factory-Buffalo, N.Y.
43 Years Serving the Industry— Solely as Rubber Reclaimers

Akron Representative: F. F. Dugan, 617 Second Nat'l. Bank Bldg.

GOODYEAR BALLOONIST AGAIN WINS CUP RACE

Ward T. Van Orman, pilot of the "Goodyear IV", a balloon entered in the Litchfield Trophy and National Elimination Balloon Race by the Goodyear Tire & Rubber Co., won the race May 1 for the third time in succession. Nine balloons took off at Little Rock, Ark., late in the afternoon of April 29. The last balloon to land was U. S. Army Balloon S-23 which came down at Mount Holly, N. C. Mr. Van Orman, who flew 780 miles, was assisted by Walter Morton.

The Goodyear Tire & Rubber Co. of California also had an entry in the race. All of the balloons were of the 35,000 cubic foot capacity size. Mr. Van Orman, as winner of the race for the third consecutive time, will retain temporary possession of the large Litchfield trophy. A cash prize amounting to $3,000 will also be divided.

RUBBER STATISTICS ARE ISSUED BY CEYLON ASSN.

(Special to THE RUBBER AGE*)*

Ceylon has experienced another successful year, according to the statistics disclosed at the annual meeting of the Ceylon Association in London, which was recently held in London.

The president, G. H. Masefield, gave the following gross figures for 1925 of the values of shipments from the colony's two main agricultural undertakings:—tea, £17,500,000 ($87,500,000); rubber, £13,000,000 ($65,000,000). It is surprising to note, therefore, that tea is still the major partner in the island's great agricultural industries.

Ceylon's 1926 standard production is 68,639 tons. It is doubtful if it will be possible to produce this quantity, but it is probable that with the stocks brought in from 1925 it will be able to do so.

For the last two years Ceylon has had an adequate supply of labor, and the figures of recruitment given in the Association's report are proof of the island's popularity with the immigrant Tamil. The Indian Government is now insisting that Ceylon shall provide a minimum wage to all Tamil labor employed on estates, and an Ordinance is to be introduced into the Legislative Council to give effect to this.

"To us," said the chairman, "it would appear to be an anomaly that the Indian Government should thus show their solicitude for their emigrants, when they have not attempted to apply similar legislation to protect the peasantry of their own country. In Ceylon our Tamil labor is better housed, fed, paid, and looked after than anywhere else, with the possible exception of Malaya, where coolies are employed under similar conditions to those in Ceylon."

A definite rubber research station is now to be developed in the Kelutara district of Ceylon.

The Association has been honored by the Ceylon Government with a request to undertake the organization of the colony's exhibit at the Seventh International Exhibition, Paris, 1927. It was responsible for the organization of the Ceylon pavilion at the British Empire Exposition, Wembley, the total expenses in connection with which for the 1925 season were £6,837 18s. ($34,189.50).

BRITISH INSTITUTE MAY EXTEND RUBBER RESEARCH

(Special to THE RUBBER AGE*)*

Lieutenant-General Sir William T. Furse, director of the British Imperial Institute, recently described the Institute's work in a lecture at the Royal Society of Arts, London.

Speaking of the plant and animals Department, Sir William said the Institute has been engaged on rubber research work for Ceylon since 1913, the investigation work being carried on at the Institute by a staff appointed and supervised by the Ceylon Rubber Research Committee, but in view of the interest taken in rubber in other parts of the Empire besides Ceylon—particularly Malaya—it is desirable that the scope of the committee should be extended so as to include Malaya at least, if not other important parts of the Empire where rubber is cultivated.

Possibly the committee may be strengthened by the addition of representatives of other rubber interests. Questions other than vulcanization, on which work is carried out at the Institute, are now assuming great importance in the industry. Special apparatus has been devised and installed at the Institute to investigate these problems.

Rubber Ace Sales Formed

The Rubber Ace Sales Co., 319 East Eighth St. Cincinnati, Ohio, was recently incorporated under the laws of Ohio to sell Rubber Ace, the inner tire manufactured by the B. F. Goodrich Co., Akron. B. C. Culbertson is president and Frank C. Johnston, secretary of the new company.

N. Diamond & Co. Formed

N. Diamond & Co., Inc., New York City, was recently chartered at Albany to deal in crude rubber and other tropical products. Authorized capital is $100,000. Incorporators are H. M. Hart, Jane Cross and Bessie Lee, all of 27 Cedar St., New York. L. R. Bachler, also of 27 Cedar St., is attorney for the corporation.

Large Tire Orders Placed

Two large orders, aggregating nearly $2,000,000 were announced by Akron factories April 15. Goodyear received an order for $1,000,000 worth of casings from Sears-Roebuck Co., and Goodrich received an order of almost like proportions from the Butler Bros. Co.

Important—**Watch next issue for special announcement of the new and greater RUBBER AGE.**

NEW COMPANY ACQUIRES SEBRING TIRE & RUBBER

According to a recent announcement by W. B. Stevenson, treasurer, the Sebring Tire & Rubber Co., Sebring, Ohio, which has been inactive for more than 18 months, has been acquired by the newly-incorporated McKinley Tire & Rubber Co., of Canton. At the present time nearly all of the machinery needed to begin operations is on hand, but the McKinley company will install some additional equipment of more modern type. It was said that tires and tubes will be manufactured from reclaimed rubber, but it was not learned whether or not the company plans to do its own reclaiming.

The McKinley Tire & Rubber Co. was formed in Canton some months ago. For some time the officers of the company have been in search of a factory. Operations at the former Sebring plant are expected to be started not later than May 15.

USE RUBBER TUBE IN CONSTRUCTING PIPES

(Special to THE RUBBER AGE*)*

Rubber is now being put to a new use in the construction of concrete pipes, as the result of a Japanese invention. A public demonstration of this device has just taken place in Mosman, New South Wales, Australia.

A trench was prepared and in this trench was placed a long rubber tube. This tube was connected by pipes with a Sullivan motor and, under pressure, was inflated until it reached the diameter decided upon—in this case 14 inches.

The concrete mixer had meantime been at work and workmen shovelled the concrete into the trench, forcing it round the rubber core. It required only a few minutes' work to complete a pipe 30 feet long. The core was allowed to remain until the concrete had set, and was then deflated, and withdrawn without difficulty, and another section added.

J. H. Tonkin, engineer in charge of the demonstration, explained that the method of constructing culverts, using a flexible baglike core was already known. But the core has hitherto been made of non extensible material, such as cotton fabric, lined with rubber. The difficulty in such cases was to withdraw the core after the pipe had been constructed and this difficulty was accentuated when the pipe was curved. The all-rubber core, however, becomes smaller along its entire length when deflated, making the matter of withdrawing it very simple. The appliance is already much used in Japan.

E. J. Lewis Joins Huber

J. M. Huber, Inc., announce the appointment of Edward J. Lewis, 9 South Clinton St., Chicago, to handle the sales of Aerfloted Arrow Carbon Black and Suprex Clay in the Chicago territory. Mr. Lewis is well acquainted with rubber manufacturers throughout that district, and his many friends throughout the trade wish him every success in this new connection.

PERSONNEL CHANGES ARE ANNOUNCED BY GOODYEAR

The election of Paul W. Litchfield to the presidency of the Goodyear Tire & Rubber Co. has brought about numerous changes in personnel which are said to constitute the first big shift of officials in 25 years.

In the new organization chart the general superintendents of the three factories, William Stephens, Akron; E. H. Koken, Canada; Harry Blythe, Los Angeles; and C. E. Falor, Marathon, are all directly responsible to C. C. Slusser, newly named as vice president and factory manager. Certain staff activities continue directly responsible to Mr. Slusser. These include the work under W. C. State who now takes the title of consulting engineer; B. Darrow, development; Charles C. Grant who becomes manager of the engineering department; E. J. Thomas, personnel; W. L. Hain, inter-plant relations; and L. E. Clapp, planning.

Ed. Huguelet remains an assistant superintendent in charge of Plant Two; W. H. Fleming, formerly general foreman at Plant Two and for the last three years in charge of materials control, goes back to Plant Two as division superintendent in charge of all tire departments. Hal Campbell is division superintendent of mechanical goods, and Sam Settle becomes division superintendent of the reclaiming plant.

At Plant One, T. A. Linanne remains as division superintendent in charge of passenger car tires; W. I. Satow is advanced to division superintendent in charge of all preparatory departments.

Duties of Division Superintendent H. T. Gillen remain unchanged. F. B. Calhoun succeeds W. H. Fleming in charge of materials control under Mr. Gillen. Leroy Tompkinson becomes a general foreman in charge of pneumatic truck tires.

The labor department, under Fred Climer, now becomes more directly a part of production; reporting directly to Mr. Stephens.

E. J. Thomas, secretary to Mr. Litchfield for the last eight years, becomes personnel manager, including efficiency, in addition to continuing as assistant to the president.

J. J. Blandin, rubber purchasing agent, is the only factory chief who remains directly responsible to Mr. Litchfield. The president will continue to keep his finger on the crude rubber situation through his direct connection with the purchasing department.

SAYS MOTORISTS WILL SAVE BIG RUBBER BILL

American motorists will save approximately $280,000,000 on their rubber bill this season as a result of the campaign against foreign manipulation and control of raw material, according to a recent American Automobile Association bulletin. This estimate is based on the differential between present prices of around 50 cents a pound and the price of $1.10 last November when Secretary of Commerce Hoover launched the campaign to secure relief for the users of rubber in the United States.

A resolution was adopted by the executive committee of the A.A.A., expressing gratification over the results of the campaign. "Secretary Hoover," the resolution said, "was confronted with many difficulties. He pivoted his position on a sound foundation."

Battery Box Patented

John B. Mattson, assignor to the Hood Rubber Co., Watertown, Mass., was recently granted U. S. Patent No. 1,558,334 on a battery box. The box has a body of hard rubber with bottom and lower portions of its vertical walls provided rubber homogeneously united therewith.

Accelerator Suit Reopened

At the request for the attorneys for the Grasselli Chemical Co., the testimony in the Grasselli-National Aniline patent suit which was concluded on March 5th before Judge Hand in the U. S. District Court, Southern District of New York was scheduled to be reopened on Saturday, May 8th to permit the introduction of additional testimony by a patent attorney brought from Germany for the purpose of giving information as to the date of the original application of the corresponding German patent to the patent in suit. This litigation, our readers will recall, was on the validity of the Hoffmann-Gottlob Patent No. 1,149,580 granted by the U. S. Patent Office on August 10, 1915, full details of which appeared in our March 10, 1926 issue.

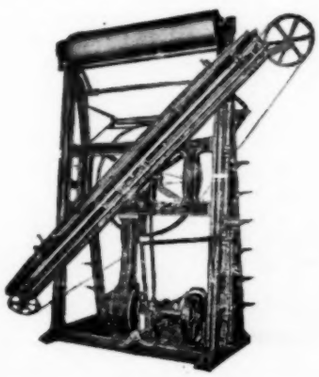
PAN-AMERICAN EDITORS VISIT RUBBER PLANTS

Akron played host on April 28 to about 75 members of the Pan-American Congress of Journalists and writers, representing newspapers in all South and Central American countries, who are in this country visiting various industrial centers.

The party was met at the Union Station in the morning by a local committee representing the city and the rubber industry. After being taken to the Portage Hotel, it was split up into five parties which visited the Firestone, Goodrich, Goodyear, Miller and General rubber factories. At these plants the journalists were taken for a complete tour of inspection, covering all steps in the manufacture of tires and other rubber products. Following the inspection each plant served luncheon to its guests.

In the afternoon buses conveyed the various parties through both the business and residential sections of the city. They returned to the hotel at about five o'clock and shortly after proceeded to the Portage Country Club for the official welcome by the Mayor and the Chamber of Commerce. Mayor D. C. Rybold made an address of welcome which was answered by Hon. Alejandro Galvis Galvis of Bucaramange, Columbia, S. A., the spokesman of the journalists. Other speakers were W. E. Brown, president of the Akron Chamber of Commerce, R. E. Lee, executive secretary and Vincent Stevens, secretary. In addition to the above, many other leading figures in Akron industrial life were represented at the dinner, among whom were Messrs. W. O. Rutherford, C. E. Cook and S. W. Caywood of the B. F. Goodrich Co.; J. W. Thomas and L. G. Fairbanks of The Firestone Tire & Rubber Co.; E. J. Stone, P. H. Hart and C. A. Stillman of Goodyear Tire & Rubber Co.; Thomas O'Neil of General Tire & Rubber Co.; Jacob Pfeiffer and R. C. Griffiths of Miller Rubber Co.; J. M. Alderfer, India Tire & Rubber Co., and many representatives of other rubber factories.

CATALPO!



THE BOLTON VERTICAL BIAS CUTTER

WE HAVE PERFECTED many improved devices for our Bias Cutter which simplify its operation, increase its efficiency and promote greater economy in operation.

Cuts cord or flat woven fabrics with equal ease and precision. Cutting range from 1-4 inch strips to 60 inch. Bias blocks on any angle from the horizontal to 45 degrees.

SPADONE MACHINE CO., INC.
15 PARK ROW NEW YORK, N. Y.

Foreign Representatives: Francis Shaw & Co. Ltd., Bradford, Manchester, Eng.

GOODYEAR TO ENLARGE MILL AT CEDARTOWN, GA.

Officials of the Goodyear Tire & Rubber Co., Akron, recently confirmed reports that the company intended to enlarge a newly-acquired cotton fabric mill at Cedartown, Ga. The expansion program was said to involve an expenditure of approximately $2,000,000. A cotton manufacturing unit which the Goodyear company purchased from the Cedartown Cotton & Export Co. about a month ago, will be operated under the name of Goodyear Clearwater Mills, Inc.

Equipment from fabric mills purchased earlier in the year at Passaic, N. J., will be removed to Cedartown where it will be installed in an addition to be built. The new building will be two stories high, 500 by 140 feet. About 100 houses will be erected for mill workers, who number approximately 600.

G. I. Parmenter of New Bedford, Mass., has been named superintendent of Goodyear Clearwater Mills, and Harry Lorton, who has been in the comptroller's office at Akron since 1919, has been selected as assistant treasurer.

Goodyear Clearwater Mills will be the largest of five fabric mills now operated by the Goodyear Tire & Rubber Co. The factory buildings at Cedartown, equipped with 30,000 spindles will aggregate 300,000 square feet of floor space. Square woven fabric for breaker strips will be the principal product, it was said. The addition planned will bring the total capacity of the Goodyear fabric mills up to 150,000 spindles. The combined production of the five mills will supply tire yarn and fabric for about two-thirds of the requirements of its three large tire manufacturing plants.

Goodyear's expansion in the textile field during the past few years has been handled by Paul W. Litchfield, president; and C. E. Slusser and C. A. Stillman, vice presidents.

AN IMPORTANT ANNOUNCEMENT

Of interest to the entire rubber industry will be made in our next issue. Watch for it!

(EDITOR)

Patents Rubber Heel

Louis Colella, Detroit, Mich., was recently granted U. S. Patent No. 1,581,389 on a cushion rubber heel. The heel has a main body portion with the upper surface inclined inwardly. A re-enforcing portion mounted at the base terminates below the upper surface of the inclined body portion. The re-enforcing portion has a number of channels which are in communication with a pocket in the main body of the heel. These channels permit the escape of air from the pocket upon the flexing of the heel.

LOWER RUBBER PRICES FAIL TO REDUCE COSTS

Although the price of crude rubber has been reduced, rubber manufacturers are not yet free from the burden of high prices imposed on them in the latter part of 1925 and the early part of 1926, according to the interpretation placed by the Department of Commerce on the crude rubber import figures for March.

A statement issued April 22 in Washington reads:

"On account of the time needed for transporting rubber from the distant producing countries to the American centers where it is made into tires and other goods, the manufacturers must buy their rubber four or more months in advance and cannot take immediate advantage of decreases in the daily or 'spot' price.

"As a result, they paid an average of 75 cents per pound or a total of $10,589,581 for the 94,421,359 lbs. which they imported during March, although the average 'spot' price during the month was only 59 cents.

"Since the 'spot' price began to decline largely in early January, it is improbable that the import price will show any considerable decrease during the next few months, as rubber imported in these periods will be from purchases made in the high period."

March rubber importations compare with those of the two preceding months as follows: January, 94,985,457 lbs. valued at $72,528,151; February, 73,618,049 lbs. valued at $58,733,370.

Perfect Beads

Entire freedom from bead trouble in the construction of straight side tires is assured by the use of either National "(Patent)" High Tensile Strength, Flat Woven, Bead Braid or our new (Pratt Patent) Bead Cables. These cables, made to dimensions specified, have seven strands, yet only one piece of wire is used without soldered, welded or brazed joint.

Write for working samples of either National flat braid or Pratt cables (no charge to tire manufacturers) and full information as to our products and service.

Our engineering department tests beads and furnishes complete confidential reports as to their stretch, set and bursting point, without charge. Inquiries solicited regarding this special service.

National Standard Company
Niles, Michigan

THE I. B. KLEINERT RUBBER CO.
is Headquarters for

Dress Shields	Reducing Garments	Powder Puff Pockets
Guimpes	Rubber Sheetings	Tourist Cases
Baby Pants	Hose Supporters	Bibs
Crib Sheets	Household Aprons	Dress Protectors
Bathing Caps	Shirlastic Ribbon	Sanitary Goods

GUARANTEED Kleinerts
REG. U. S. PAT. OFF.

I. B. KLEINERT RUBBER CO., 485 Fifth Avenue, New York

RECLAIMED RUBBER

Grey—Black—Red

We Specialize in Fine Reclaimed Rubbers.

Your Inquiry Is Solicited.

THE DEFIANCE RUBBER CO.
Defiance, Ohio

E. C. SHAW RETIRES AS A GOODRICH DIRECTOR

At the annual meeting of stockholders of the B. F. Goodrich Co., Akron, held April 21, E. C. Shaw of Akron, retired from the board, completing over thirty years of service with the company. Mr. Shaw served as vice-president and general manager in charge of works from 1907 to 1917. One of the most outstanding achievements during his active life with Goodrich was the conversion of the Goodrich plants from steam power to electric power which created widespread interest in industry generally throughout the country.

Mr. Shaw's retirement from active business marks an honorable and successful career. He has taken a very active interest in the community life and welfare of Akron. This is especially pronounced in connection with his activities with the Springfield Lake Sanatorium near Akron, into the management of which he has put many original and practical features that have attracted nation-wide attention.

C. E. Cook was elected to fill the vacancy on the board. All other directors whose term of office expired, were re-elected. Stockholders also voted to retire 11,880 shares of preferred stock in accordance with the charter provisions.

At the regular Directors meeting which followed, officers were re-elected.

A dividend of $1.00 per share on the common stock was declared payable June 1, to stockholders of record May 15, the regular dividend on the preferred stock payable July 1, having been declared at the January meeting of the directors.

Plan Branch Factory

The Archer-Strauss Rubber Co., Framingham, Mass., plans to open a branch factory in Boston where part of the Dean factory on North Main St. will be occupied. It is expected that 200 persons will be employed in the new plant. The Archer-Strauss company manufactures rubberized fabrics, raincoats, hospital sheeting, sanitary fabrics, tire cases and kindred lines.

Raritan Rubber Formed

Raritan Rubber, Inc., New Brunswick, N. J., was recently incorporated to manufacture rubber goods. Authorized capital is $200,000 of preferred stock and 4,400 shares of common stock of no par value. Incorporators are R. E. Watson and A. D. Watson, of New Brunswick.

The new company has completed negotiations for the factory of the Placement Co. on Jersey Ave., in New Brunswick. It is said that this factory will be in operation within 30 days. Orders have been placed for the machinery and equipment required, and the first consignment is expected shortly. Officials of the Raritan company stated recently that between 50 and 75 persons will be given employment when the plant opens for the manufacture of solid tires.

"Giantic" Registered

The Phelps Tire & Rubber Co., Garfield, N. J., recently filed for registration in the U. S. Patent Office under Ser. No. 225,574, the trade-mark "Giantic", which the company claims has been used since Oct. 5, 1925, on automobile tires and inner tubes.

ESSEX ADDITIONS SAID TO BE NEAR COMPLETION

Work on two new additions to the factory of the Essex Rubber Co., Trenton, N. J., are rapidly nearing completion, and it is expected that they will be opened early this summer. One of the buildings, which will be used as a "mill room", is 250 ft. long and 65 ft. wide, one story, of brick construction. The other building is to house a machine shop, store room and trimming and packing departments. It will be two stories, of brick construction and 250 ft. long by 55 ft. wide. The cost of both structures, exclusive of equipment, is $38,000. The new additions will replace two buildings destroyed by fire last winter.

IT PAYS TO MICRONIZE

Grip!

AN enormous molecular tenacity—the tremendous grip of each tiny particle—makes MICRONEX supreme for rubber footwear. It means the utmost in resiliency and long wear.

MICRONEX makes possible a lighter weight tennis shoe—a tougher sole and heel. The sun will not crack it, nor will water readily rot it. The jet black color makes black varnish superfluous.

For all stocks for tennis foxing, soling, moulded soles and heels, and fibre soles, insist upon

MICRONEX

REG. U.S. PAT. OFF.

The King of Rubber Pigments

You will find that it pays to MICRONIZE. Samples and specific data furnished upon request.

Binney & Smith Co.
41 E. 42nd Street-New York City

CATALPO!

RUBBER ROAD MARKERS NOW BEING EXPLOITED

The problem of adequately marking roads has long been a perplexing one to the engineers and road builders of this country. It has been comparatively easy to mark the roads but difficult to get them to stay marked.

Those identified with road construction and safety organizations have witnessed numerous attempts to accomplish this, but with only partial success. It has been agreed the solution will only be reached when some method has been devised that will permit a marker to be incorporated in the road itself, that will outwear the road, be impervious to the elements, be non-absorbent and that will hold its original shape and color.

Rubber Meets Requirements

Following many tests, these requirements are said to have been fully met in a new rubber combination just perfected, which consists of a rubber block carrying the necessary markings vulcanized under enormous pressure to a steel plate one-quarter of an inch thick. This is to be imbedded in the road flush with the level of the pavement.

Numerous applications of rubber as paving material, both in this country and abroad, have proved conclusively that the wear-resistance of rubber is unequalled by any other material. As early as 1870 a section of street at St. Pancreas Station, London, England was paved with rubber. In 1923 it was removed for inspection, and the astounding discovery was made that after 53 years of constant service, subjected to impact of heavily calked shoes of horses, iron tires of wagons and pounding of heavy modern traffic, it had worn less than three-sixteenths of an inch.

The Northern Avenue Bridge of Boston, which is paved with rubber, had a heavy freight car roll over it without causing any damage. The planking at either end of the rubber shows deep grooves from the flanges of the wheels, while no trace can be found in the rubber.

Many similar cases can be cited to illustrate the wearing ability of rubber. Rubber, being resilient gives when anything strikes it. When two hard substances come together, wear is sure to follow. The resiliency of rubber prevents the abrasive effect produced by the striking of a harder material upon it. Therefore, the value of using rubber for marking roads as against any other material is quite apparent.

Disadvantages of Paint

Up to the present time, paint has been chiefly relied upon for marking roads, due perhaps to the absence of any other method. The difficulty with paint has been its lack of durability. Its effectiveness is limited to a few days or weeks when it often fades or peels off. In addition to the short period of its usefulness, it is necessary at the time of installation to barricade the road until the paint dries.

To a small degree rigid markers of a hard substance have been used with more or less success, constituting an improvement on the old painting method.

The new rubber marker is being exploited by the American Road Marking System and is said to possess many advantages. The device being set flush with the pavement, offers no jar or impediment to the motorist. Once installed it is there to stay during the life of the road itself.

CEYLON RUBBER GROWER TO PAY LARGE DIVIDEND

(*Special to* THE RUBBER AGE)

Very remarkable results have just been published by two Ceylon producers. One, the Ceylon (Para) recently announced a dividend of 100 per cent for 1925, and its associated company, the Sunnygama, declared a dividend of 80 per cent. The profit of the former was £80,909 (about $404,545), an increase of 470 per cent, representing a return of 115 per cent on the company's issued capital.

An average price of 2s.7¼d (62½ cents) per lb. was obtained on a restricted crop of 934,674 lbs. The change which has taken place in the fortunes of the industry since the post-war collapse, may be measured by a comparison with the 1921 figures of a crop of 975,540 lbs., which realized only 9¼d. (18½ cents) per lb.

Sunnygama's profit of £67,982 ($339,910) showed an expanse of 346 per cent, its rubber being sold at 2s.7d (62 cents) per lb.

CABARRUS COTTON MILLS

M. L. CANNON
PRESIDENT & TREASURER

KANNAPOLIS, N. C.

Superior Quality Tire Fabrics

EGYPTIAN-PEELER
KARDED & COMBED
CORD & SQUARE WOVEN

CANNON MILLS, Inc.
Selling Agents

NEW YORK
55 Worth St.

CHICAGO
327 S. La Salle St.

A. W. REID
Representative

O'NEIL OPPOSES ANNOUNCEMENTS OF TIRE PRICE CUTS BY MANUFACTURERS

President of General Tire & Rubber Co. Believes all Tire Price Changes Should be Made Solely Through Dealers —Claims Present System Causes Much Instability

Declaring himself opposed to publication of tire price cuts by manufacturers on the ground that such a policy injures the dealers, William O'Neil, president of the General Tire & Rubber Co., Akron, recently advocated a new price policy which would allow the dealer to set prices.

"Under the present system," he said, "when a rubber manufacturer announces a price change, he actually forces a dealer to change prices to the consumer. Yet the manufacturer in reality has nothing to do with the consumer, selling as he does entirely through dealers.

"As an example," Mr. O'Neil continued, "pick out almost any other industry—the leather industry, for instance. Cowhides fluctuate, of course, as do other raw products, yet a price change is never broadcast throughout the country by shoe manufacturers. Such changes are handled entirely through their dealers, and they in turn make whatever price adjustments are necessary directly with the public with whom they do business. Because of this policy, there is never the instability in this market that there is in the tire market where consumers follow any fluctuations closely and expect an immediate and equal fluctuation in the dealers' prices.

Points Out Fallacy

"The fallacy of the policy of broadcasting price changes has been unquestionably proven during the last few months, when the average consumer, reading the reports of the rubber market, expected immediate adjustment in the retail field. Had the dealer been the one to make these price changes at his own discretion, much of the recent uncertainty and most of the hanging back on the part of consumers would have been eliminated.

"Most of the instability which has been seen in the tire industry can be traced directly back to this policy," Mr. O'Neil declared, "while if the price changes had been settled quietly between the manufacturer and dealer, the general public would have accepted such changes as a matter of course, exactly the same as they do in other industries.

Would Stabilize Industry

"A right about face to the methods used in other great industries would do much to put the tire manufacturers on a more even and stable basis," he concluded, "and I am looking ahead to the time when the tire manufacturers will agree on this point and change their price policy so that the dealer will make all price adjustments and so take up that feeling of speculation with which the average tire customer views his tire needs today."

Important—Watch next issue for special announcement of the new and greater RUBBER AGE.

U. S. RUBBER CO. ADDS GAWTRY AS DIRECTOR

Lewis B. Gawtry, director in the New York Edison Co. and other prominent public utility corporations, was elected to the board of the United States Rubber Co. at the annual meeting of stockholders held in New Brunswick, N. J., April 21.

Mr. Gawtry was the only new member added to the board of directors. Directors re-elected were James S. Alexander, Walter S. Ballou, Nicholas F. Brady, Matthew C. Brush, Middleton S. Burrill, Newcomb Carlton, John W. Davis, James Deshler, James B. Ford, Sir Charles B. Gordon, Francis L. Hine, Ernest Hopkinson, Henry L. Hotchkiss, Samuel M. Nicholson, Homer E. Sawyer, C. B. Seger.

aerfloted
SUPREX CLAY

Maximum Re-enforcing Value at Minimum Volume Cost.

Prompt and uniform shipments of this superfine clay pigment are now available.

Carefully refined exclusively for rubber compounding, SUPREX CLAY may be relied upon for the maximum re-enforcing effect obtainable from this class of pigment.

SUPREX CLAY carries the full guarantee of compounding uniformity which has made

aerfloted
ARROW BLACK

The Highest Standard Gas Black of the Rubber Industry

J. M. HUBER, Inc.

Manufacturers of High Quality Pigments for Rubber Manufacture

BOSTON
PHILADELPHIA
CLEVELAND
CHICAGO
LOS ANGELES

MAIN SALES OFFICE
130 West 42nd St.
New York City

TORONTO
LONDON
PARIS
ANTWERP
HAMBURG

BRITISH DUNLOP PROFIT ALMOST DOUBLED IN 1925

(*Special to* THE RUBBER AGE)

Profits of the Dunlop Rubber Co., Fort Dunlop, Eng., were nearly twice as large last year as in 1924. This is the outstanding feature of the annual report just issued. After allowing for depreciation the total was £3,207,611 ($16,038,055), as against £1,763,973 ($8,819,865). Owing to the acquisition of fresh businesses, involving the issue of more debenture stock, interest charges amounted to £311,382 against £263,822. In addition £150,000 was absorbed in premium on debentures paid off. These deductions bring the net profit to £2,746,229, which compares with £1,500,152.

This increase of 85 per cent in the net profit is the more remarkable, since it follows upon an expansion of 50 per cent in the preceding year's profits. No less than £1,294,768 was transferred to the general reserve, bringing the total up to £1,600,000 ($8,000,000).

Dividend Announced

The ordinary shares will receive a dividend of 15 per cent, this absorbing £1,008,522, and the sum carried forward is raised from £525,152 to £593,091. The dividend—the first to be paid since 1920—disappoints the optimists, since it makes the yield at the market price less than 4½ per cent, but it must be remembered that the reserve was heavily raided a few years ago in order to repay the blunders of a former administration, and that it is the directors' duty to build up an adequate reserve.

Profits would have warranted a dividend of 30 per cent had the reserve been strong enough.

The accounts have been drawn up on very conservative lines. Provision has been made for meeting the entire trading losses of the American company down to December last, and the discount on issue and premium on redemption of its bond issues made in 1922 have also been written off. The American company is now on a profit-earning basis.

The company produced a far greater volume of profits in 1925 than in former years. Additional equipment has had to be provided for the factories at Fort Dunlop, England, in France, and in Germany. Both the French and German factories are now showing good profits. More machinery is being installed in the cotton mills at Rochdale, as they have been unable at certain seasons to meet the full demands made on them.

The whole of the 47,426 acres of planted rubber estates owned by Dunlop will be in bearing this year, and an additional 11,000 acres of land are being planted.

As £7,000,000 ($35,000,000) of the company's present borrowing limit of £7,500,000 ($37,500,000) has already been absorbed by debentures, it is proposed to raise the borrowing power to £11,000,000 ($55,000,000).

Dunlop has acquired control of Charles Macintosh & Co. and its allied concerns, and other acquisitions include those of W. & A. Bates and William Goodyear & Sons. As the management of these businesses has involved an addition to the labors of the board, it is proposed to increase the remuneration available for distribution among certain directors by the addition of one-half of one per cent of the net profits in any year, beginning with 1926, after allowing for depreciation and a 15 per cent dividend on the Ordinary shares. On the basis of last year's figures the extra remuneration would amount to less than £10,000 ($50,000) a year.

As a result of the company's acquisitions the total of the balance sheet has risen from £14,865,485 ($74,327,425) to £22,929,419 ($114,647,095). The principle increase is in investments, which now stand at £14,849,623, against £8,080,385. The American investment is valued at £3,926,693, against £1,560,928. The directors are satisfied that the higher figure is a fair valuation.

Goodyear Honors Gillen

P. W. Litchfield, president of the Goodyear Tire & Rubber Co., Akron, recently awarded Hank Gillen, superintendent of production service, a 25 year service pin. After the diamond-studded pin had been fastened to Mr. Gillen's lapel and Vice President Slusser had poured a pound of gold into his hand, there was a round of handshaking and congratulations.

Mr. Gillen started work with Goodyear on April 9, 1901, packing carriage tires. A year later he was given charge of the shipping room floor and in 1904 was placed in charge of the entire shipping room and yard gang. In 1914 he was made division superintendent on solid tires, accessories, bicycle and motorcycle tires and repair departments. He took over the functions of production control during 1920, and since 1922, he has been superintendent of the production service divisions of both plants.

Peachey Manager Here

A. Herring-Shaw, general manager of the Peachey Process Co., Ltd., London, England, is in America for the purpose of concluding contracts or licenses for the Peachey Process between the Peachey company and the Grasselli Chemical Co., 347 Madison Ave., New York.

CLASSIFIED ADVERTISING

10 cents a word, minimum charge $2.00, payable in advance.
Address replies to Box Numbers, care THE RUBBER AGE, 225 Fourth Ave., New York.

SITUATION WANTED

Young man, thirty years of age, desires connection with small mechanical factory (preferred), willing to work at and thoroughly understands any job. Desirous of working hard for advancement, if possibilities are such. Twelve years practical experience, including executive. Address Box 428
THE RUBBER AGE, 225 4th Ave., N. Y.

NOW AVAILABLE
Man with 17 years experience available to Mechanical Goods Manufacturer. Experienced from bench to supervisor. Mold designing and rubber compounding.
Address Box 426
THE RUBBER AGE
225 4th Ave., N. Y. C.

EQUIPMENT FOR SALE

MACHINERY FOR SALE
4 Mixing Mills, 14 x 36″, with gears and shaftings;
2 Mixing Mills, 16 x 40″, with gears and shaftings;
1, 3 Roll Calender, 14 x 14″;
1 Tuber; 1 Skiver; Large assortment steam tables.
Rubber equipment and machinery tools.
Right prices for quick call.
Box 423, THE RUBBER AGE.

EQUIPMENT WANTED

Two experimental mills on one base;
Peerless rubber cutter;
Rubber bailer and Scott Tester.
Box 424, THE RUBBER AGE.

PROOF OF RESULTS!

Read what a recent advertiser in the Classified columns of THE RUBBER AGE writes about the results obtained:

"We desire to inform you that the results from our ad. placed in your April 10, 1926, issue, for a Tire Superintendent were highly pleasing.

"The number of reliable, efficient men who answered our ad. gave us a desirable list from which to choose.

"Above all, we want to take this occasion to thank you very kindly for the splendid cooperation and courteous treatment you extended us."

If you need additional help, used equipment or a job —
USE THE RUBBER AGE

INTERNATIONAL PULP CO., *41 Park Row, New York, N. Y.*
SOLE PRODUCERS OF PURE **ASBESTINE** SPECIALLY PREPARED FOR USE IN RUBBER
Covered and Protected by Letters Patent Registered at U. S. Patent Office, Washington, D. C.
LIBERAL WORKING SAMPLE FURNISHED FREE

MARCH NET IMPORTS OF CRUDE WERE 40,317 TONS

Re-exports of crude rubber from the United States during March of 1,836 long tons give a figure of 40,317 long tons for net imports during that month, according to information just released by the Rubber Division, Department of Commerce.

The Division reported re-exports as follows:

	POUNDS	DOLLARS
France	11,200	8,064
Germany	398	209
Netherlands	4,500	2,115
Canada	4,096,326	2,724,846
	4,112,424	2,735,234
Long tons	1,836	

Figures had previously been released which showed the gross imports of crude rubber in March to amount to 42,153 long tons. By deducting these re-exports of 1,836 long tons, the net imports in March are seen to be 40,317 long tons. Net imports in February, 1926, amounted to 31,435 long tons, and net imports for January 40,320 long tons. Net imports for the first three months are accordingly 112,072 long tons. These figures are preliminary and subject to correction.

Confirm Wilmer Resignation

Paul W. Litchfield, president of the Goodyear Tire & Rubber Co., Akron, before he left for Arizona on a vacation, confirmed reports that E. G. Wilmer is tendering his resignation as chairman of the Goodyear board of directors. Mr. Wilmer is taking this action because he expects to devote most of his time to the Dodge Bros. Motor Co., of which he was elected president some weeks ago. However, Mr. Wilmer will remain a director of the Goodyear company.

It is not expected at the Goodyear plants in Akron that a successor to Mr. Wilmer will be named.

FAULTLESS MAKING RUBBER CIGARS

The Faultless Rubber Co., Ashland, Ohio, manufacturers of rubber sundries and specialties, inform us that the clever sponge rubber cigars which were mentioned in our issue of April 10, are manufactured by themselves. Vendors on the streets of New York City have recently been selling these imitation perfectos in large quantities.

Lambert Assigned Patent

Mark A. Replogle, Akron, assignor to the Lambert Tire & Rubber Co., Barberton, Ohio, was recently granted U. S. Patent No. 1,478,760 on a tire-band expander. The expander comprises a table with slots through which fingers project. These fingers are movable from and toward the axis of the table to expand and release a band, and are also movable up and down in a direction approximately parallel to the axis of the table to project and withdraw the pins. Means are provided for effecting the movement of the pins.

Important—Watch next issue for special announcement of the new and greater RUBBER AGE.

GOODYEAR EXPERIMENTING WITH SYNTHETIC RUBBER

Production of rubber by synthesis seems to be one step nearer as the result of recent experiments carried on by the chemists of the Goodyear Tire & Rubber Co. in the production of synthetic rubber from potatoes. Through polymerization of hydrocarbon molecules formed during treatment of a potato "mush" made by grinding the vegetables, a scum arises to the surface, which properly dried is a fair counterfeit of crude rubber.

Laid out in rough sheets the product has all appearances of a fair grade of crepe, but when stretched or compressed the resemblance is no longer evident. The potato rubber is stiff and lacking in resilience. Its return to natural dimensions is slow, but comparable with cheaper grades of reclaimed rubber.

Goodyear chemists have estimated that in quantity production they can make potato rubber for considerably less than $1 a pound—perhaps as low as 60 cents. Further experiments are in progress.

Processes are said to be similar to those announced recently by German chemists whose efforts to produce synthetic rubber are now constituting the bulk of their national research. In abrasive qualities, the potato "crude" is said to be the equivalent of good grades of reclaim.

Ajax Directors Re-elected

Directors of the Ajax Rubber Co., New York, were re-elected at the annual meeting of stockholders held recently.

—*for* better tire beads *at less cost*

—a new Flat Tape for bead construction that adds to the strength and anchoring qualities of the bead—and at a saving of approximately 2c to 8c per tire.

"ACCO" Flat Tape can be made of any size or tensile wire—yet smaller in cross section as the wires lie flat and parallel, equalizing the tension. The wires are held in place by a fine filler wire.

Let us show you how this construction can add to the efficiency of your tires. Our engineers will gladly make specific recommendations without obligation to you. Write us today.

AMERICAN CHAIN COMPANY, Inc.
BRIDGEPORT CONNECTICUT
In Canada:
Dominion Chain Co., Limited, Niagara Falls, Ont.

"ACCO" Flat Tape *for* Straight Side Tire Beads

Aero Brand DPG
DIPHENYLGUANIDINE
DOTG
DIORTHO-TOLYLGUANIDINE

The two most popular guanidine accelerators, made by the same process from basic raw materials which we control. Highest purity and uniform quality.

Stocks of Aero Brand DPG are carried at Warners, New Jersey; Akron, Ohio; San Francisco, and Azusa, California; Chicago, Illinois; Montreal and Toronto, Canada; and London, England.
DOTG is carried at Warners, N. J. and Akron, O.

Address all communications to New York Offices
AMERICAN CYANAMID CO.
511 FIFTH AVENUE NEW YORK, N.Y.

DIPLOMA AWARDS ARE ANNOUNCED BY I. R. I.

W. F. V. Cox, secretary of the Institution of the Rubber Industry, 10 Charing Cross Road, London, W. C. 2, has issued a list of members of the Institution who have recently been granted diplomas.

The list is not confined to election without examination as has often been the case with professional bodies in the early stages, but includes two Associates who have passed an examination. The list includes 18 candidates awarded Fellowship Diplomas upon the recommendation of the examining board; four members of the examining board itself who were awarded these diplomas; 10 candidates who were granted Associateship Diplomas (without examination) in general rubber technology; six candidates granted Associateship Diplomas in engineerng; and five awarded Associateship Diplomas in science.

Two candidates for an Associateship Diploma in rubber technology were awarded the diploma after passing the examination published in next column.

Kanawha Rubber Formed

The Kanawha Rubber Co., Dunbar, W. Va., was recently incorporated with an authorized capital of $40,000. Incorporators are James White, W. T. Moore and A. L. Chamberlin, Dunbar; L. E. Poteet, J. S. Jones, C. E. Seigfried, O. I. Adkins, L. W. Hamilton, John L. Rowan and J. D. Woodroe, all of Charleston.

EXAMINATION IN RUBBER TECHNOLOGY

The candidate is expected to answer five of the following eight questions:—

1. What do you understand by "Vulcanization"? State approximately the date of its introduction. Why is it necessary in rubber manufacture?
2. What abnormal conditions or constituents of raw rubber are likely to lead to slow curing? What steps would you take to rectify this defect?
3. Mention three examples of each of the following types of compounding ingredients:—
   Pigments.
   Reinforcing Agents.
   Inorganic Accelerators.
   Organic Accelerators.
   Softeners.
4. Describe briefly the construction of a three-bowl calender and state how it is used in (a) the production of plain rubber sheet and (b) "Frictioning" rubber on cloth.
5. What precautions are usually taken to avoid the scorching of rubber stocks during and after the process of mixing, calendering and forcing?
6. The following results were obtained in a tensile test on a sample of rubber 0.20″ wide by 0.15″ thick:—
   Load at Break—70 lbs.
   Elongation at break—250%
   Calculate the breaking strain per square inch. From the above results, what type of compound would you expect this to be?
7. You are given the following formula for a rubber mixture:—

Rubber	(sp. gr.	= 0.92)	54%
Sulphur	(s. g.	= 2.0)	3%
Litharge	(s. g.	= 9.3)	5%
Zinc Oxide	(s. g.	= 5.6)	8%
Lithopone	(s. g.	= 4.1)	18%
Magnesium Carbonate	(s. g.	= 2.2)	12%
		Total	100%

   Calculate the approximate specific gravity of the stock and give the percentage (by volume) of rubber present.
8. Give an account, in general terms, of the official regulations applying to the use of the following materials in rubber works:—
   (a) Litharge.
   (b) Rubber Solvents.

DUNN IS OPTIMISTIC OVER FISK OUTLOOK

Before H. T. Dunn, president of the Fisk Rubber Co., Chicopee Falls, Mass., sailed from New York April 24 on the *La France*, for a short vacation, he expressed satisfaction over the outlook for his company. Despite the late spring, sales of the Fisk company for March were slightly in excess of those in March, 1925, he said.

"April looks as though it would exceed March," Mr. Dunn continued, "with profits on a relative basis. The best six months of the company's fiscal year, which end October 31, are still ahead of us. Owing to the close contact which American rubber manufacturers have established with the rubber growing industry, tire prices today are based on rubber prices materially below the peak and are the lowest tire prices in the world. It is not generally known that English manufacturers have priced their tires on a higher average cost for raw materials than United States manufacturers."

Accelerator Patents Errata

In the list of rubber accelerator patents published on Page 65 of our April 25 issue an error occurred in the spelling of the name *Cadwell*, which was printed "Caldwell". Mr. Cadwell is chemist at the Naugatuck Chemical Co., Naugatuck, Conn., and is well known in the rubber industry.—THE EDITOR.

PEQUANOC RUBBER COMPANY
Office and Works: BUTLER, N. J.
MANUFACTURERS OF
RECLAIMED RUBBER
WITH A REPUTATION FOR
UNIFORMITY -- RELIABILITY -- CLEANLINESS

SULPHUR
FOR THE RUBBER TRADE
"TIRE" BRAND SUPERFINE Rubber Sulphur
"TUBE" BRAND VELVET Rubber Sulphur
Specify "Tire" and "Tube" Brands on your orders. This will assure you of Stauffer quality and service.
Stauffer Chemical Co.,
Houston Texas
San Francisco, Cal. Chauncey, N. Y.

The CARTER BELL MFG CO
CARTER BELL STANDARD SINCE 1903 RUBBER SUBSTITUTES
150 Nassau Street New York

KASE-QUINBY BUSINESS TRUSTEED TO COMMITTEE

In order to bring about a constructive reorganization of the affairs of the Kase Quinby Rubber Co., Inc., 935 Broadway, New York, the business was trusteed to a committee, headed by Frederick R. A. Stiefel, of the Merchants' Credit Adjustment Co., at a meeting of the general creditor group April 24.

The financial condition of the company was reported to those present as indicating ample solvency, with an indebtedness of $110,000 against assets of $142,000. The detailed liabilities as furnished by counsel for the company were said to be $70,000 to merchandise creditors and the remainder to the banks. Assets were figured to consist of merchandise inventory, $115,000; cash in bank, $2,000; and machinery and fixtures, $25,000.

Personnel of Committee

In addition to Mr. Stiefel, the committee which is to adjust the affairs of the company consists of Henry L. Smith, of Cheney Bros.; W. Bordman Reid, of Bishop Gutta Percha Co.; J. M. Hamelberg, of Plymouth Rubber Co.; E. A. Crawford, of F. M. Schnall, Jr.; Richard Falter, of Richard Falter & Co. Max E. Sanders, associated with Robert P. Levis, was retained as counsel to the committee.

The meeting was told that internal dissension had precipitated the present financial difficulties of the business. Minority stockholders were stated to have withdrawn from the company, and it was stated the business would be reorganized by the majority stockholders under the direction of the creditors' committee.

Hood Registers "Arrow"

The Hood Rubber Co., Watertown, Mass., recently filed in the U. S. Patent Office under Ser. No. 219,332 the trade-mark "Arrow" (printed vertically in capital letters). The mark has been used since April, 1909, on rubber boots and shoes, rubber overshoes and rubber-soled canvas shoes. The Hood company also filed for registration the trade-mark "Arrow White Rock" under Ser. No. 219,335, which has been used since Jan., 1914, on rubber boots and shoes, rubber overshoes and rubber-soled canvas shoes.

Stedfast Rubber Formed

The Stedfast Rubber Co., Boston, was recently chartered to manufacture rubber products. Authorized capital is $50,000. Incorporators are Abraham Sydeham, Boston; William H. Sydeham, New York City; and Benjamin A. Trustman, Boston.

CATALPO!

BID FOR UNITED & GLOBE TENTATIVELY ACCEPTED

When factory, land and equipment of the defunct United & Globe Rubber Co., Trenton, N. J., were offered at public auction April 27, on order of the United States District Court, a bid made by B. A. Small of Philadelphia was tentatively accepted.

Mr. Small, who is described as a factory speculator, made the high bid of $118,500 for the entire property. The company's assets were then divided into 656 parcels. If the total offered for these parcels exceeds Mr. Small's offer, his bid will be rejected. Mr. Small also made the high bid of $50,000 for the land and buildings, without equipment.

The company was placed in the hands of receivers in July, 1923, and recently has been operated by a special agent named by the Federal Court. The receivership action which resulted in the sale was brought by Shafer & Meyer of New York, dealers in crude rubber, a creditor.

The final purchase offer must be approved by the Federal District Court before the deal can be closed and is subject to objection by creditors. The plant is now owned by Peter Vredenburgh of Freehold, who purchased the factory in November, 1924, for $250,000 at a receiver's sale.

J. Philip Bird of Jersey City and Edward C. Rose of Trenton are the receivers.

How Should Rubber be Dried ?

The Rubber Shortage demands economy in crude and reclaim preparation.

Carrier Drying Systems,

including the well known Hunter Process, produce uninjured and uniformly dried stock. These Systems assure reduction in time, space, labor and milling costs.

Write for details.

Carrier Engineering Corporation

Offices and Laboratories
750 Frelinghuysen Ave., Newark, N. J.

DIAMOND
MICA

NON-METALLIC WATER GROUND

Highest Grade for Rubber Industries

Pure—finely powdered—For use in tread stocks, repairing tires, in air bags, inner tubes and various kinds of molded mechanical goods.

Desirable as it is a Toughener and Heat Resister

THE HARSHAW FULLER & GOODWIN CO.
CLEVELAND, OHIO

MILLS

Crabtree, N. C. Newdale, N. C.

Samples upon request

STOCKS CARRIED AT

Cleveland, O. Trenton, N. J. Chicago, Ill.

Urges Pacific Coast Plants

Alfred A. Aya, vice president in charge of sales of the Columbia Tire Corp., Portland, Ore., stated in a recent address before the 26th annual convention of the Manufacturers' Association of Washington that there was no logical reason why tires and other rubber products should not be manufactured on the Pacific Coast.

Mr. Aya held that increasing trade in tires with the Orient and the proximity of the Pacific Coast to the rubber plantations in the East are natural advantages and constitute arguments for the establishment of additional rubber factories on the Pacific Coast.

Reclaiming Firm Chartered

The Central Rubber Reclaiming Co., Findlay, Ohio, was recently incorporated with an authorized capital of $20,000. Incorporators are Albert H. Morrill, Mabel Boswell, Norma Tolle, A. J. Zanone and T. G. A. Ginter.

File Hydro-United Report

The report of the receiver of the Hydro-United Tire Co., Philadelphia, in equity, as audited by Franklin S. Edmonds, special master, was presented in U. S. District Court for the Eastern District of Pennsylvania on May 5. The report found a balance of $33,492.77 in the hands of the receiver and recommended a dividend of 83 per cent on account of administration expenses which are preferred. There were no funds in this account from which a dividend could be paid to either creditors or stockholders.

"True Blue" Registered

The India Tire & Rubber Co., Akron, recently filed the trade-mark "True Blue" for registration in the U. S. Patent Office under Ser. No. 227,121. The company claims use of the mark on inner tubes since August 19, 1925.

Stedman Sails for Europe

James H. Stedman, president of the Stedman Products Co., South Braintree, Mass., recently sailed for England on the *Olympic*. Mr. Stedman, who is regarded in the industry as an authority on rubber flooring, intends to address a group of British rubber manufacturers while in London and will give them the views of this country on the world's supply of rubber. He plans to visit Paris, Berlin and The Hague.

Ajax Doubles Capital

At the annual meeting of stockholders of the Ajax Rubber Co., New York, held April 20, an increase in the capital stock of from 500,000 shares to 1,000,000 shares was approved. All the retiring directors and officers were re-elected.

Important—Watch next issue for special announcement of the new and greater RUBBER AGE.

Fremont Rubber to Build

The Fremont Rubber Products Co., Fremont, Ohio, recently started to make extensive alterations in its plant on Croghan St., the former factory of the Reversible Window Co. A large addition will be erected and modern machinery installed. Two large mills, a calender and several new presses will be added.

The company has been doing an excellent business since its organization about 18 months ago. Molded rubber goods, such as stair treads, mats and automobile running board mats are the principal products being made at the present time, but several new lines will be added in the near future. Lou D. Weber is president and general manager of the company.

Sees Crucial Year

(*Special to* THE RUBBER AGE)

"I am not going to do any prophesying regarding the future course of the rubber market. The subject is too difficult," said R. Arnold, in his chairmanship address at the recent annual meeting of the Pilmoor Rubber Co., Ltd., in London.

"All I can say," he continued, "is that 1926 is a very crucial year, because it is the first time since 1920 that the world is going to be asked to take approximately a full output from plantations. Once over 1926, I firmly look for the world's consumption to have caught up all that everybody can possibly produce."

H. MUEHLSTEIN
& COMPANY, Inc.

CRUDE AND SCRAP

RUBBER

"For Service"

NEW YORK - 41 East 42nd St.
AKRON - 111 Savings & Loan Bldg.
CHICAGO - 327 S. La Salle St.
BOSTON - 176 Federal St.

WAREHOUSES: Jersey City, N. J.

WHITING

Domestic

313
SUPERFINE
XXX

High Calcium Whitings
ground to any fineness

WM. S. GRAY & CO.
342 Madison Ave.
New York

RAYON TIRE FABRICS MAY BE MANUFACTURED

Dame Rumor, abroad in New York textile circles, recently whispered that an unnamed cotton mill had proven from experiments that the use of rayon (artificial silk) in the manufacture of tire fabrics was practical. It was intimated that this mill had been taking 150 cases of an imported viscose rayon a week for some time.

Efforts to trace down the rumor and obtain the name of either the rayon importer or the fabric mill were unavailing. Through hearsay, it was learned that the importer had said he could not even state any advantage rayon enjoyed over long staple Egyptian cotton. He was reported to have said that the utmost secrecy surrounded the manufacture of the new tire fabrics, but was claimed to have intimated that rayon might be stronger than cotton for use in tire fabrics, and possessing more covering power, would permit the tube to fit more snugly in the casing.

European Experiments Abandoned

Experiments made with rayon in Europe in this connection were understood to have long since been abandoned because they proved unsuccessful. As a result, much interest attached itself to the latest rumor.

In the table issued by the Viscose Company showing industries using rayon and the percentage consumed by each, no mention is made of tire fabrics. Yet Dame Rumor persisted that a 300-denier fiber was being used in the United States for this purpose and claimed that it was possible to use A. B. and even C. quality rayon, so that it is thought that ungraded rayon fiber is adaptable to the manufacture of tire fabrics.

Sponge Tube Registered

The Poplar Bluff Rubber Co., Poplar Bluff, Mo., recently registered a trademark consisting of a picture of Aladin and his lamp containing the words "Miracle Inner Tire" in the U. S. Patent Office under Ser. No. 217,120. The trademark has been used for inner tires made of sponge rubber since April, 1925.

Transfer Portage Property

Transfer of the interests and holdings of the Portage Rubber Co. of Barberton to the Seiberling Rubber Co. has been completed in Akron with filing of deeds covering property formerly owned by the Portage company.

Five tracts of land in all were transferred to the Seiberling Co. Portage has been operated as a subsidiary by the Seiberling Co. for some years. Seiberling owns the controlling interest in the Portage company.

Plans are expected to be completed shortly for sale of all assets of the Portage to Seiberling and the eventual liquidation of the smaller concern.

GOODYEAR GRANTED USE OF BURR DISTRIBUTOR

Judges Funk, Washburn and Pardee, sitting in the Ninth District Court of Appeals (Ohio), handed down a decision April 19 in the suit brought by the Goodyear Tire & Rubber Co. against Alois Schoenenberger in an effort to compel him to transfer to the company an invention made while he was in the employ of Goodyear.

Although the decision was in favor of the inventor, the Court ruled that Mr. Schonenberger was not an inventor and was not employed by Goodyear as such and that the contract under which Goodyear was seeking specific performance could not be the basis for a suit in a court of equity by reason of the fact that it lacks mutuality, all of the agreements being made by Mr. Schonenberger and none by the Goodyear company.

The invention which caused filing of the suit in Common Pleas Court on Dec. 8, 1923, is a device for stringing and distributing rubber heel burrs. The inventor won a decision in Common Pleas in August, 1924, and the appeal followed. Under the decision of the Court of Appeals, Goodyear will continue to have the right to use the invention in its factories free of charge, but all other rights are vested in Mr. Schonenberger and he can grant the right to anyone he wishes.

Important—Watch next issue for special announcement of the new and greater RUBBER AGE.

AKRON-WILLIAMS A-W PRODUCTS

Heater Presses
Molds and Cores
Tubing Machines

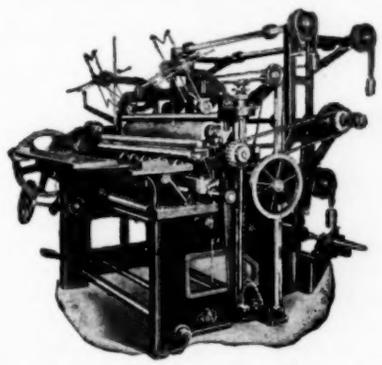
THE WILLIAMS FOUNDRY & MACHINE CO.
"In Business Since 1888"
AKRON, OHIO

EMBOSSING CALENDERS
For Artificial Leather, Oil Cloth, Carriage and Automobile Covers

DRYING MACHINES
with Copper or tinned iron Cylinders for Cotton Ducks, Drills and Sheetings

The Textile-Finishing Machinery Co.
OFFICE, No. 83 EXCHANGE PLACE
PROVIDENCE, R. I.

CAMACHINE 6-C



—for quantity production of all kinds of stripping used by the rubber industry. If you make, use or sell stripping, write for information to—

CAMERON MACHINE CO.,
61 Poplar St., Brooklyn, N. Y

MICHELIN MAY PRODUCE ONLY S. S. TIRES SOON

Writing from Paris where he is stationed, H. H. Kelly, Assistant Trade Commissioner, has informed the Department of Commerce that Michelin may soon begin to standardize on the production of straight-side tires. Mr. Kelly's complete report is as follows:

"That Michelin, largest manufacturer of tires on the European continent, will have practically standardized on the production of straight-side tires within a year or 18 months, is the well-founded report now current in France. No public announcement of the change is expected before the complete line of straight-side tires is ready.

Change Considered Important

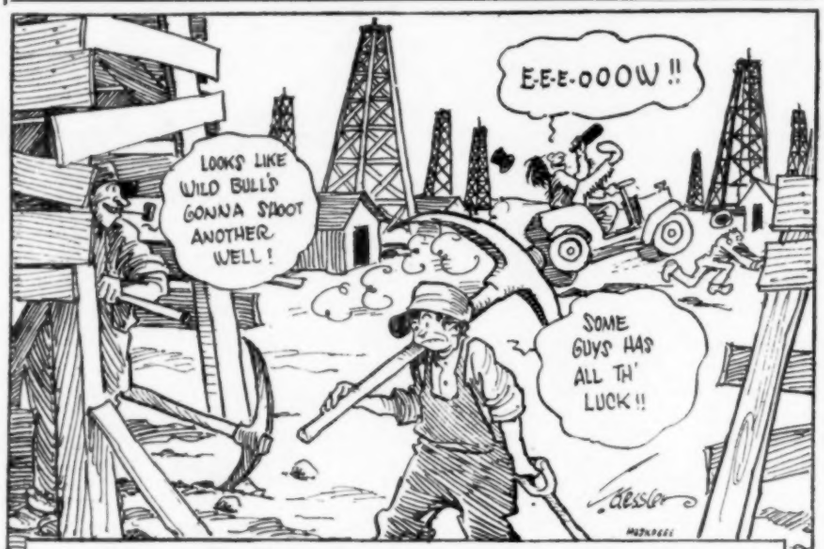
"This expected switch from clinchers to straight-sides is a matter of far-reaching importance in France and in international tire trade. Since its organization, the Michelin company has specialized in the clincher types and has won a very strong position in European industry. In France, Michelin is estimated to control slightly over 90 per cent of the original equipment business and more than 70 per cent of the replacement orders. In other countries on the continent, the company's hold on the market is not so strong, but it still occupies a leading position in most of the central and southern European countries, and is a most powerful competitor in other world markets.

"The change in production will likely be a gradual development. Michelin is already supplying countries other than France with straight-side tires, and it is said that these types constitute as high as 25 per cent of the firm's present production. The Michelin French price list now carries the following sizes: 29 x 4.40, 27 x 4.40 and 28 x 4.95, 30 x 5.77 and 31 x 5.75. In the near future, the following sizes will also be offered: 33 x 6.75, 33 x 6.00 and 30 x 5.25.

The opinion is generally held that Michelin has been forced to adopt the new types by the aggressive competition offered by American and British manufacturers, who during 1925, especially, have been undermining Michelin markets with the more modern tires, and have even placed important contracts in France. Michelin has already met this competition in foreign markets, and has now found it necessary to change its policy for France.

"Michelin's production of tires early in 1926 was estimated at about 17,000 daily, 12,000 to 14,000 of this number being produced at the main plant in Clermont-Ferrand."

Boyhood Days of the Industry's Leaders



EDWIN D. GERMAIN, PRESIDENT OF THE DUNLOP TIRE AND RUBBER COMPANY, STARTED WITH A PICK AND SHOVEL IN THE OIL FIELDS OF OKLAHOMA.

BY KESSLER *Courtesy Automotive Daily News*

Exchange Seat Brings $6,000

Memberships on the Rubber Exchange of New York, Inc., established a new high record April 20 when Werner S. Hammesfahr, 68 Broad St., one of the charter members sold an extra seat to Clarence R. Heaume for $6,000. The price compares with a previous sale at $5,000. Mr. Hammesfahr bought the extra seat for $1,000 last February when the Exchange was organized, and has therefore realized a profit of 500 per cent.

REPORT CRUDE MOVEMENT FROM N. ATLANTIC PORTS

At the tenth regular meeting of the Atlantic States Shippers Advisory Board, held at the Hotel Seneca, Rochester, N. Y., on April 8, R. H. Goebel, chairman, submitted the report of the rubber committee. It was reported by Mr. Goebel that the movement of crude rubber from North Atlantic Ports for the second quarter of 1925 was approximately 106,000 tons. It was estimated that the movement for the second quarter of the current year would be approximately the same figure.

Keystone Loss Smaller

The financial statement of the Keystone Tire & Rubber Co., New York, for the year ended Dec. 31, 1925, shows a net loss of $87,030, after interest, depreciation and taxes. This compares with a net loss of $277,853 in 1924.

"We have tried to indicate that Factice is of value in proofing stocks for qualities that other ingredients, including rubber itself, do not always give."

Extract from— "Uses of Factice In Proofing."

RUBBER FACTICE OF HIGHEST QUALITY THE STAMFORD FACTICE STAMFORD CONN THE STAMFORD RUBBER SUPPLY CO

Est. 1900 Inc. 1919

THE KUHLKE MACHINE CO.

Formerly Jones & Kuhlke

AUTOMOBILE TIRE MOLDS and CORES

GENERAL MACHINE WORK

Akron, Ohio

FORD COMPLETES STUDY OF BALLOON INFLATION

Under-inflation of a balloon tire costs the owner just 700 miles of service per pound under the correct pressure, according to the results of a series of experiments by the Ford Motor Company These experiments were conducted in connection with a campaign to help Ford car owners get the most out of their tires.

To determine at just which point the Ford size balloon tires—29x4.40—yielded the maximum comfort to passengers consistent with maximum mileage, all makes of tires were tested. At the end of the test period, the exact loss per pound of under-inflation was calculated in terms of mileage and a bulletin was sent to Ford dealers and service stations advising the correct pressures.

A number of common tire ailments were traced directly back to under-inflation. Among the most common are rim cuts, tread separation, over-heating and stone bruising in addition to a more rapid rate of natural wear and deterioration.

On the other hand, every pound of over-inflation takes its toll of comfort and the fundamental value of balloon equipment is lost. Other advantages of low pressure tires, namely greater traction, ability to travel over soft ground without sinking and quick stopping without skidding are also nullified in a direct ratio to the extent of the excessive air pressure.

The following inflation table has proven to best combine riding comfort with long life in 29x4.40 balloon tires:

Pounds of Inflation

TYPE	FRONT	REAR
Roadster	27	27
Coupe	27	27
Touring Car	27	27
Tudor	27	30
Fordor	27	30
Runabout with pick-up body	27	30

Viles Talks on Rubber

A. L. Viles, general manager of the Rubber Association of America, delivered an address on the crude rubber situation on April 21 before the Motor Truck Association in Philadelphia.

A. C. BOWERS IS NAMED MASON SUPERINTENDENT

A. C. Bowers, who has been an important factor in production of the Mason Tire & Rubber Co. for the past four years, has been appointed factory superintendent, in charge of production in both the Bedford and Kent tire plants.

Mr. Bowers' rise in the tire business has been phenomenal. He has been actively engaged in tire production work for the past eight years and has had experience in all phases of production activity. He received his early training in the tire plants of several competitors and went to Mason several years ago in charge of the Bedford plant.

When Mr. Bowers took hold of things at Bedford the average production for each employee per day was five-and-a-half tires. Under Bowers' command, factory layouts were changed, new machinery designed, and a new spirit of craftsmanship inspired in the organization. The result was that he made a record, still to be equalled in the tire industry, by raising the average production per man to 11 tires per day, and at the same time improved the quality of the finished product, which is proven by the service records of the Mason 29 x 4.40 Gruv-Lock Balloon tire.

A. C. BOWERS

Under Mr. Bowers' direction, the percentage of blemish tires turned out in the Mason factory has been reduced to a point that sets a new record for efficient production. In fact, this record is said to be one of the best ever achieved in the Akron district.

Mr. Bowers is a young man, well seasoned with experience, and holds the unstinted respect and esteem of the entire Mason organization.

Fisk Assigned Patents

William Procknow, inventor of a tire repair stand recently granted U. S. Patent No. 1,581,360, has assigned this patent to the Fisk Rubber Co., Chicopee Falls, Mass. The device comprises means with an annular face, against which the tire may be pressed to expose the defective portion. Means acting on the tire to hold it in such position through its own resilience are also provided.

The Fisk company has also been assigned U. S. Patent No. 1,581,361, granted to Harry Smith on a device for assembling tread units which comprises a table with stationary parallel guides adapted to position the longitudinal edges of a member of the tread unit. A guide bar, adapted to be swung into a position adjacent to the face of this tread-unit member, is hinged to the table.

Important—Watch next issue for special announcement of the new and greater RUBBER AGE.

HOLSTEIN RUBBER PLANS BRANCH AT HARRISBURG

The Holstein Rubber Co., Hartford, Conn., manufacturers of rubber flooring, is now completing negotiations for the establishment of a branch office and warehouse in Harrisburg, Pa. According to R. R. Kusnitt, sales director, the new branch will give employment to 130 persons. The company has already leased 5,000 square feet of floor space for the warehouse on Seventh St. and Mr. Kusnitt is seeking quarters for the offices.

Lee Gets Tire Patent

John Kearns and Ezra Gray Weber, assignors of one-half to the Lee Tire & Rubber Co., Conshohocken, Pa., were recently granted U. S. Patent No. 1,581,743 on a pneumatic tire and its method of manufacture. The tire comprises in part several plies of fabric; bead strips over which the plies are folded back; and a gum strip interposed between the abutting edges of some of the plies and the overlapping edges of others.

Litchfield Takes Rest

Paul W. Litchfield, elected president of the Goodyear Tire & Rubber Co. March 29, left his office in Akron April 21 for Arizona, where he plans to stay for a month or more. Mr. Litchfield had been scheduled to speak at the sixth annual anniversary of the dedication of Goodyear Hall, but cancelled the engagement because of ill health.

Goodyear Suffers Fire

Spontaneous combustion was said to be responsible for a fire which recently damaged one of the buildings in the chemical unit of the Goodyear Tire & Rubber Co. factories in Akron. Officials stated that the loss did not exceed $5,000, and that the fire did not interfere with plant operations. The building will be rebuilt immediately.

Salem at Capacity

Operations at the factory of the Salem Rubber Co., Salem, Ohio, continue at capacity, according to officials. The company has increased its production of both tires and tubes and seeks to make further increases.

In All the World

we are the largest producers of carbon black selling their own product. We control in excess of 20,000,000 lbs. annually to insure fulfillment of customers' requirements.

CARBON BLACK

GODFREY L. CABOT, INC.

940 Old South Building, Boston

first

with the NEWS
with the PHOTOS
with the MARKETS
with TECHNICAL INFORMATION

THE RUBBER AGE has published within the past few months *first* details of the following important news happenings :

Opening of Cocoa & Rubber Exchange;
Opening of Rubber Exchange of New York;
Akron Meeting of Rubber Chemists;
Grasselli vs. National Aniline Patent Suit;
Testimony and Complete Final Report of House Investigating Committee on Rubber;
Hoover's Conservation Campaign;

AND IN THE APRIL 10 ISSUE—

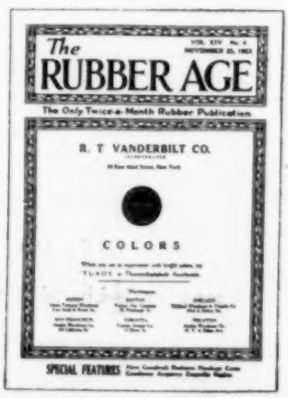
The First and Only Rubber Paper to Publish the Complete

BIERER-DAVIS ARTICLE on
"The Economical Use of Reclaimed Rubber as a Substitute for New Rubber."

To keep up with latest developments you must

READ

THE RUBBER AGE!



To get the surest results at lowest rates you should

ADVERTISE IN

THE RUBBER AGE!

Recent Artistic Applications of Rubber

Rubber Flowers, New Rubberized Fabrics and Galoshes which Harmonize with Frock Worn are in Good Demand

ONE HAD become so accustomed to look upon rubber as applied principally to general utilitarian purposes, such as tires, mechanical parts and adjuncts to machinery, cables and electrical devices, etc., that its adaption to more artistic and aesthetic purposes is apt to be overlooked. Moreover, those who are not in close touch with recent developments in the industry, do not even know of the existence of many of these new artistic applications. One of the most striking of these recent adaptions is the production of artificial flowers in rubber suitable for a number of purposes.

Rubber Flowers in Demand

"Beware of your eyes; they don't always tell the truth," said Sir William Bragg, the scientist, the other day. Anyone seeing for the first time one of these rubber roses, which are now in such great demand, might also add to this, don't trust your nose, or place too great reliance in your touch. For, in appearance, these roses might have been culled from an old world garden. They are delicately scented and the texture of the material gives to the leaves and petals a close resemblance to the velvety feel of the actual blossom.

Roses were the first flowers made; then violets and carnations were produced with equal success and it will not be long before chrysanthemums, dahlias, tulips, sweet-peas and many other flowers are imitated.

These rubber flowers have a great advantage over any other artificial flowers because they can be washed without coming to any harm of losing any of their naturalness. Hence they are everlasting and extremely hygenic.

Have Many Uses

They have many uses. They are ideal for decorative purposes in hotels, restaurants, ships and public places. Used in this way, and providing charming floral decorations for the table, they will save expense on the florist's bill and permit floral decorations in countries or towns where it is impossible to buy fresh flowers. As water does not damage them they are particularly suitable for wreaths and will maintain a bright appearance on a grave for months on end, thus avoiding the sadness arising from the desolate appearance presented by a grave on which the flowers have faded and turned brown. Again for shop window displays they are admirable and it is not impossible to use them for the garnishing of evening gowns. A strikingly interesting point about them is that for the first time Great Britain has exported artificial flowers to France, previously their stronghold.

To brighten the home the most alluring rubber lamp-shades variegated in colors and artistically decorated have been devised. These shades throw a cheerful glow and never look dusty or faded. They may be washed with soap and sponge to bring up the surface as bright and as good as new.

Another useful rubber application recently brought out are mats that will not slip on the glossiest surfaces and which are non-conductive of heat. They are produced in all sorts of colors and pretty designs. For the bathroom, offering the softest tread, are the sponge rubber bath mats which lend themselves to the reproduction of exceptionally artistic designs.

Nowadays the aesthetic sensibilities of the modern woman appear to be more developed, for even in such articles of common utility as the bath sponge and hot water bottle she insists upon pleasing appearance. So we have the colored rubber sponge, sometimes garnished by a simple design, and the famous marbled "jazz" hot water bottle in a variety of beautiful color blends.

Fabrics with all the appearance of glossy silk are the latest disguise in which the commodity has presented itself. In this form it is responsible for innumerable artistic applications. Curtains in bungalows and house-boats which help to make cozy the interior are ideal when made of rubberized silk. Of the same material covers for the cushions of punts and boats, will not spoil, and are as cheerful and gay as any of those made from other fabrics.

It will not be long before we see on the river and riviera rainshades made of this beautiful fabric and decorated with the most delicate looking flowers. Similar in every respect to the common parasol, these rainshades differ only in that they are as effective against rain as sunshine, and even after the heaviest downpour they still look as good as new.

Finally the "jazz" jumper has appeared to enable the wearer to defy rain and continue her pursuit of golf and yet feel that her clothes are becoming. Then there are the rubber hats which the modern girl can wear and look as smart as a Paris model, and yet be proof against any weather.

Latest of all come the colored overshoes which slip neatly over the shoes. These are provided in colors to match any costume and dress, and even in gold and silver. If these do not provide adequate defense against the ravages of the weather, the meticulous will not be discomfited, for is there not the rubber spat which covers the whole foot and reaches high enough to completely protect the stocking.

The articles enumerated above do not comprise one tenth part of the artistic uses which the feminine mind has devised out of this product. But the important thing is that the commodity is now being produced in forms which open up a multitude of new possibilities for combined artistic and utilitarian application. One recent innovation alone which provides a vast field for development is the production of rubber in a form which renders it possible for it to be cut and sewn as easily as any other fabric.

Making Rubber Flowers at Cow & Sons, London

Watch for the
NEW
RUBBER AGE
in June

The Bulletin of the Rubber Growers Association.

A Lost Process for Synthetic Rubber

IN HIS published memoirs, Hooley, the notorious British promoter, tells of a rubber scheme which was brought to his attention. The inventor claimed that by adding a small amount of latex to a pan of coal tar compounds and maintaining the mixture at a tropical temperature, the "rubber bacilli" would breed and in the course of a few days produce a pan of rubber.

Hooley took a chemist with him to Guernsey to examine the inventor's claims and both men were astounded at the results obtained. "I can't understand it," the chemist admitted. "It's genuine rubber he turns out, no doubt of that. Before committing myself to a report I would like to bring my son over." The chemist and his son probed the process; they slept in the room where the gas tar was being treated; they prowled around the mill at all hours of the night to ascertain if rubber was secretly being brought in and "melted down". They tried to bribe the workmen engaged in the place; in fact, they did everything that was humanly possible to unravel the mystery, but all in vain. They finally reached the conclusion that the inventor had discovered the secret of manufacturing synthetic rubber.

"I thought it good enough to get busy," continues Hooley, "and immediately left for England, where on arrival I went to see Lord Kitchener and told him everything. 'This is better than your Nairobi scheme', I said enthusiastically as I went on to describe the possibilities of the invention. Lord Kitchener's eyes glistened as I dilated on the money we could make, and it was without any great hesitation that he wrote me out a check for £2,000, so that he could be in on the ground floor. My old professor was frankly puzzled over the whole affair.

" 'It's either a marvellous idea, or else a great swindle', was his final summary, and for the time at least I felt inclined to believe that I had stumbled on something that was going to revolutionize the rubber market. Lord Kitchener stood in with me to the tune of £10,000, and altogether we paid the better part of £50,000.....The inventor kept his secret. He wouldn't part with the exact formula under £2,000,000, and I couldn't see myself raising that amount for something that might be nothing more than a very clever spoof.

"Then one fine morning the bubble burst. I was up in Throgmorton St. on some business when I suddenly ran into an old friend. 'Hullo!' I said breezily. 'What are you doing for a living now?'

" 'Well, to tell you the truth old chap,' replied my friend, 'I've got hold of something that is going to make a tremendous fortune. I can't tell you what it is just yet.'

" 'Come on,' I said, taking him by the arm and gently leading him to a near-by hostelry, where I called for a bottle of the best. 'Let's hear all about it. I'll keep it a dead secret.'

"The better part of the bottle had gone before I discovered the great Golconda. It was a half share in a synthetic rubber process then being developed in Guernsey.

" 'I'm glad you've told me this, old chap', I said, when he had finished. 'I might have been caught myself'.

"I did not like shattering my friend's blissful dream of his millions to come, but I could not leave him without giving him a warning to be careful. That done, I began to make a few inquiries. I discovered, to my great astonishment, that no fewer than eight of my friends possessed a half share in the 'invention'! Six of them, including myself, joined forces, and went over to have a settlement with the villian of the piece. Our interview with the culprit was brief and to the point.

" 'Pay back the money you've had, or we'll put you in gaol', we said.

"He tore his head and swore it had all gone in wild speculation.

" 'You can have till to-morrow to find it', was all we said, thinking that he must have hidden it somewhere. Nobody had ever heard of him punting on 'Change. But evidently it had gone beyond all reparation. That very night he set fire to his works and took his secret with him when, in the height of the blaze, he put a pistol to his head and blew out his brains. The old mill burnt to ashes, and in the morning his charred remains were found beside some of his very pans in which he had boiled up the gas tar.

"Lord Kitchener was not very sympathetic when I told him what had become of his £10,000.

" ' It's just about what he deserved', grunted his lordship."

Rubber Now Used For Gravel Chute Linings

Another use for rubber is suggested by the success of a special rubber lining for gravel chutes now in use at the plant of the Roquemore Gravel Co. at Montgomery, Ala.

The customary lining for gravel chutes is steel, but the abrasion of the sand and gravel passing through the chutes wears out the steel in a short time. In some plants this has been varied by the use of worn-out rubber conveyor belting, which gave slightly longer wear, but nothing has stood the test of abrasion as well as the rubber chutes employed by the Roquemore company.

Until last year, all chutes at the Roquemore plant were lined with ¼-in. boiler sheet steel lining, which wore out within a week and a half, so that new linings had to be installed every 7 to 10 days.

Early last year, A. A. Ringland of the U. S. Rubber Co.'s Birmingham office interested J. D. Rocquemore of the Montgomery plant in the use of rubber, and prepared a special formula for the experiment. Rocquemore agreed to the experiment, and lined one of his chutes with a ½-in. sheet of this rubber early in May, 1925. The rubber was made without fibre.

Since the installation of the first rubber chute, all the chutes at the plant have been lined with rubber, and the original lining is to all appearances as good as new. Mr. Rocquemore says that not even the square edges at the lower end of the chute have been worn off. The impact of the pebbles on the rubber, together with the fact that a great deal of water passes through the chute with the gravel, tends to keep the rubber alive.

New Tractor is Shod with Rubber

French Engineers Perfect a Caterpillar Apparatus in which Rubber Supplants the Endless Metal Tread

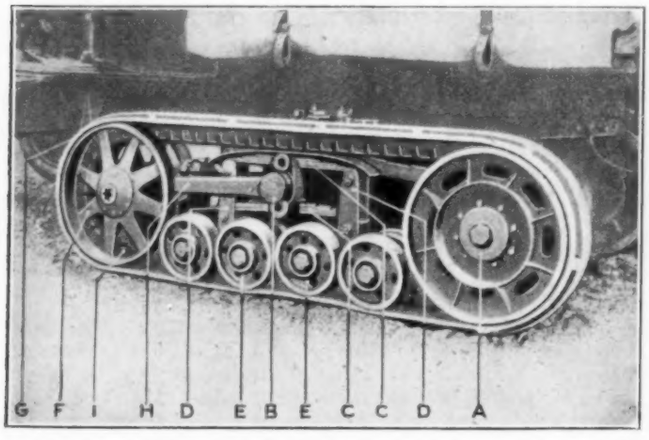
THE CONSTANT increase of road traction, both in weight and numerically, presents a two-fold problem. First, the increasing repair and up-keep cost which it entails upon the road authorities is becoming a burden with which they can hardly contend; and second, the increasing taxes on heavy transport which are being imposed in various countries to meet this cost is becoming daily a more serious matter to users of road traction vehicles.

Hence, any invention tending to mitigate the destructive effect of heavy vehicles on the road is worthy of special attention.

Messrs. Kegresse-Hinstin, in conjunction with the Citroen Motor Car Co. (of France), have succeeded in devising a caterpillar apparatus, in which the endless metal tread is supplanted by rubber, which gives a fair promise of overcoming the difficulty. In addition to modifying the damage to road surfaces, this device enables motor vehicles of any description to travel without hindrance over any surface, whether soft, hard, rough, or snow-covered, and, in addition, to negotiate grades as steep as 38 per cent.

Rubber Belt Propels Tractor

The supporting and propelling machinery of the apparatus consists of a rubber tread of canvas and vulcanized rubber in the form of an endless belt. The inner surface of this belt is equipped with projecting teeth, which engage with the driving cogs. The outer surface has transverse non-skid rubber treads homogeneous with the rest of the belt. This belt is fitted to the tractor by means of a carrier train and two pulleys, a free pulley, "A," which is approximately midway from each end of the chassis, and the rear motor pulley by which the power is transmitted. The axle, however, of this rear pulley does not, as in the case of an ordinary chassis, carry the weight of the vehicle. The weight is taken by a special axle "B", situated about midway between the two pulleys. Articulated, elastic rocking beams "C," are mounted at either end of this axle. Each end of the rocking beams is reconnected by checks "D" to the under part, the ends of which are joined by "D" pieces to a small beam which takes



the weight on the small pulleys "E." The weight of the whole vehicle is thus evenly transferred to the ground by the intermediary of the jointed apparatus, the small pulleys and the rubber band. It does not carry any burden and rests on the ground under its own weight.

As is well known, the carrying capacity of a wheel depends on the diameter and the width of the felloe. But the width of the latter is limited. The official regulations prescribe a width proportioned to the weight to be carried, and taxes are also charged according to the width of the tread. But, in any case, however wide the felloe of the wheel may be they have one particular disadvantage compared to the caterpillar tractor; when starting, especially upon inclines, they will skid round before they grip, hence churning up the road surface and sinking therein. This is overcome with the metallic caterpillar tractor, which was popularized during the

THE CITROEN-KEGRESSE SHOWN ON ROUGH GROUND

war, but, notwithstanding their slowness, these latter do not overcome the road problem. On account of their great weight and the rigid surface of the tread they rapidly destroy road and tracks. In addition to which they are exceptionally noisy.

Vehicles with rubber caterpillar treads, described in the foregoing, obviate all these difficulties. They do not mill the track when starting, and when an obstacle is encountered the forward pulley lifts to the weight of the obstacle, and establishes with the inner part of the rubber belt, an inclined plane over which the flexible pulleys (the carriers of the weight) roll without difficulty. This system permits of rapid progression over all kinds of ground and renders the most awkward slopes and unevenesses easily negotiable. Applied to passenger cars this triple suspension system makes a trip even over the roughest roads or broken ground easy and comfortable. A 10 hp. touring car, fitted with such a rubber caterpillar mechanism, was exhibited at the Luxemburg Fair, and caused considerable interest. This car had traveled across the African desert at an average speed of 15 to 18 kilometers per hour on a gasoline consumption of 27 litres per kilometer. At the end of the test the rubber caterpillar showed practically no signs of wear.

In the event of future warfare, these tractors would be of very great significance. Experiments have already been carried out under very severe test conditions by the French Military Authorities, and by the English at Bovington Camp, which have exclusively demonstrated the efficiency of the rubber caterpillar system of propulsion for armoured cars, ambulances, gun limbers, etc., both in foreign and colonial service. Moreover, the economy of running cost of these tractors has been proved for boat haulage (presumably on canals) wagons and mine trucks. They have also given most satisfactory agricultural service and forestry transport along paths and tracks inaccessible to ordinary vehicles.

When one considers the mechanical properties of rubber, the wide margin of its co-efficient of elasticity, its tensile

(*Continued on Page* 102)

Bulletin of the Rubber Growers' Association, London, March issue.

The Russian Rubber Industry

Trust, Composed of Seven Companies, is Planning to Build a Large Tire Plant at Jaroslawl on the Volga

THE world war and the revolution have caused a complete transformation in the Russian scheme of things as regards rubber manufacture. Soon after the declaration of hostilities works such as *Prowodnik*, and *Kaoutchouk* in Riga were transferred to the interior, and after the revolution expropriated without compensation.

After nationalization of the industry, seven companies were fused into a trust, having its headquarters in Moscow, Maroseika, 12. The managing director is W. J. Leschawa-Murat, who is represented by G. D. Zurupa. Other members of the board are N. M. Techuprow, A. A. Janen, and L. G. Chwostowsky.

The seven factories employ 16,846 hands, and are operating on the following *annual* production schedule,—

Rubber footwear	9,759,000	pairs.
Tires and tubes	389,000	units.
Transmission belts	8,600	units.
Tubing	861,000	kg.
Mechanicals	298,500	kg.

The factories are designated by numbers as follows,—

Treugolnik, Unit No. 1	Leningrad	No. 1.
Bogatyr	Moscow	No. 2.
"Kaoutchouk"	Moscow (From Riga)	No. 3.
Prowodnik	Jaroslawl (From Riga)	No. 4.
Prowodnik	Jaroslawl (From Riga)	No. 5.
Prowodnik	Moscow	No. 6.
Treugolnik, Unit No. 3-a	Leningrad	No. 7.

The following sequence of employment figures for the Treugolnik concern is worthy of note:

October 1.24	6,758	hands.
January .25	7,917	hands.
April .25	10,974	hands.
July .25	12,323	hands.

An increase of 82% in nine months.

The Rubber Trust recently ordered the construction of a large rubber works, specializing in tires, at Jaroslawl, on the Volga, in which the machinery of the "Prowodnik" works, formerly at Riga, will be installed. The whole tire output of Russia is to be concentrated in this plant, whereas the rubber footwear will be the exclusive output of the "Treugolnik" and "Bogatyr" concerns. The third unit, "Kaoutchouk" (formerly "Freysinger Brothers" at Riga) in Moscow, will specialize in proofed goods, light rubber articles, and bike tires.

The new works at Jaroslawl which is to be called "Volga Rubber Works", will contain the latest and best equipment and machinery of a type new to Russia, and will start off with not less than 1,000 tires per day. This will of course make an early increase in the production figures for the country.

One reason for the choice of Jaroslawl on the Volga is because the Rubber Trust owns considerable land only 4 kilometers distant, right on the river, thus making it possible to erect their warehouse right on the bank of this great water highway, which is navigable all the way to Persia. The construction costs of this new venture will amount to 9,000,000 Gold Marks, but will be all found within the Trust.

Thus, although the Russian rubber industry is once more on the climb, it is not yet keeping pace with the increase in the rubber imports, as is witnessed by the following statistics:

RUSSIAN RUBBER IMPORTS

		FROM OCT. 1924 'TIL JULY 1925	FROM OCT. 1923 'TIL JULY 1924
Rubber, Gutta Percha, Balata and Rubber Scrap	t.	3,954	2,785
Rubber Thread	kg.	31,223	4,607
Rubber Sheeting, Soft Rubber Goods, Rubber Cement	kg.	3,021	2,761
Rubber Tubing and other Rubber Goods containing Fabric, etc.	kg.	5,972	3,707
Rubber Footwear	kg.	152	291
Solid Rubber Tires	kg.	3,114	7,105
Inner Tubes	kg.	8,191	6,310
Pneumatic Casings	kg.	48,521	14,419
Transmission Belting, Hose containing either fabric or wire	kg.	7,834	3,229
Conveyor Belting		666	1,432
Rubber Transmission Belting	kg.	12,000	116,581
Hard Rubber Plates	kg.	418	28
Miscellaneous Hard Rubber Goods	kg.	521	212
Rubber treated fabrics, with or without felt, for card clothing	kg.	32,319	....

It is illuminating to notice the imports of rubber transmission belting, of which, in 1923-24, 116,581 kg. were brought in for the purpose of reconstructing the Russian industry. This figure fell in the following period to 12,000 kilos, showing how the Russian Industry began fulfilling domestic requirements.

Translated by William B. Wiegand from an article in *Gummi Zeitung*, Feb. 19, 1926, by C. Peters.

NOTES BY TRANSLATOR.

The writer spent some time in the Baltic States late in 1925, and visited Riga, where the news he received of Russian rubber developments closely coincides with that described in the above article. In fact, the production of rubber footwear, which is shown above as 40,000 pairs per day, is very likely to be more nearly double this figure at the present time.

There can be no doubt as to the marked increase in Russian rubber production. What seems a little more doubtful, however, is the quality of the goods they are making. Reports are current in northern Europe to the effect that the rubber footwear at present being turned out is of inferior quality and workmanship. Doubtless, these defects will be straightened out in the course of time.

The view was expressed in Germany, that when this rejuvenated producing activity comes abreast of the domestic demand, Russia may well become an important factor in the export market, particularly as regards rubber footwear.

New Tractors Shod with Rubber

(*Continued from Page* 101)

strength and resistance to abrasion, one is not surprised at the wearing capacity of the rubber-tired caterpillar. The life of these belt tires is practically unlimited. Tests to date have shown a life of 5,000 to 6,000 kilometers on hard, stony roads and 10,000 kilometers on soft roads. Moreover, the radius of transport extends to every condition of ground. Again they cause a minimum of damage to roads and tracks, considerably reducing repair costs.

In order to protect the roads there is no doubt but that in every country the authorities will be compelled to enforce rigid measures to regulate the weight and circulation of ordinary vehicles. Moreover, taxes on such vehicles, as is already the case in Belgium, will be proportionate to estimated damage caused. Consequently, the rubber caterpillar tractor being the least destructive type of vehicle, will certainly be rated for lowest taxation.

A Deviation of the Law of Poiseuille

Tests Show that the Mobility of Rubber is Not a Constant, but a Function of the Velocity of Flow

By Bruno Marzetti

A PRECEDING article[1] on the flow of plastic materials at low velocities showed the singular behavior of uncured rubber when it is made to flow slowly from a tube or from an opening. The velocity of flow is not a linear function of the pressure as required by the law of Poiseuille, but instead is a function of the square of the pressure over a wide range. This behavior is apparently the same as the deviation from the law of Poiseuille found by other investigators for other plastic materials under low pressures and which has generally been attributed to disturbing influences. Consequently it would be supposed that at greater pressures the quality of material flowing should be a linear function of the pressure in exactly the same way as has been found for plastic matrials in general.

To find this *transition from the law of squares to the law of Poiseuille*, materials similar to those in the preceding article[1] were tested at pressures increasing up to 50 kg. per sq. cm., the velocity of flow reaching several meters per minute. But up to this point no indication of a deviation toward the linear form could be found. Either the law of squares holds true accurately over this whole range[2], or else there is toward the highest velocities of flow a deviation similar to that which appears in diagram II of the preceding article, in other words in a sense opposite to that found, since the flow tends to increase still more rapidly than the squares of the pressures.

No Mention of Deviation Found

As a means of controlling crude rubber in industrial laboratories at the present time, its viscosity is measured in solutions made up of a suitable solvent, usually benzene. Now in the literature of this subject no mention is made of any deviation of the law of Poiseuille like that which was encountered not only with pure rubber alone, but also when mixed with other ingredients such as softening oils, mixtures which can be regarded as highly concentrated solutions. It was therefore of interest to investigate the borderland between these mixtures and these solutions to determine the behavior in the transition range from one to the other.

Two solutions of different concentrations of rubber in benzene, both high in rubber, viz., 1:4 and 1:2.34, when tested by suitable means showed at once a difference in behavior. With the first the flow varied directly with the pressure, whereas with the second the flow increased with the square of the pressure or even more rapidly.

During these preliminary tests benzene proved to be an unsuitable solvent with the apparatus available, on account of its volatility. For this reason it was replaced in the experiments by solutions in heavy mineral oil. These solutions of rubber in heavy oils were easily prepared by adding part of the liquid to the rubber while the latter was being milled, and when enough oil had been added to make this mixture stick to the rolls adding further oil while churning.

With a mixture of rubber and mineral oil (density 0.888 and boiling above 300°C) in the ratio of 1:2.15, and using the apparatus from which the data in III in the preceding article were obtained (outlet tube 50 mm. long and 4 mm. in diam.), the flow varied directly with the pressure up to about 0.3 kg. per sq. cm. or up to a flow of 0.2 g. per minute. Above this pressure the flow increased relatively more rapidly, until toward 0.5 kg. per sq. cm. the flow varied with the square of the pressure. This latter relation continued up to a pressure of 5 kg. per sq. cm., the maximum employed in the expts.

With other more viscous mixtures (1:1.43) a similar behavior was found throughout, except for a marked tendency for the flow to increase still more rapidly than the square of the pressure for the highest values of the latter.

The experiments were carried out at room temperatures.

In further experiments the apparatus was furnished with a glass tube 180 mm. long and inside diameter of 1.26, numerous determinations being made with various materials. An examination of the data obtained shows that in the case of a rubber-oil mixture, the ratio $P/(tH)$, where P is the weight of fluid flowing in time t and H is the pressure, increased greatly with increase of pressure, whereas in the case of castor oil it remained virtually constant with increase of pressure. The two fluids had almost the same viscosity.

Castor oil in fact had a normal behavior with no systematic deviation from the law of Poiseuille, whereas a mixture of rubber and heavy oil showed a normal behavior only up to a certain pressure (about 0.5 atm.) after which there appeared a deviation which continued to increase until at about 10 atm. pressure the behavior conformed to the law of squares. It follows that when the fluidity is determined at low pressures castor oil gives the higher results, whereas at higher pressures the rubber solution appears to be almost 3 times as fluid.

It may be noted that rubber manifests a friction effect, *i. e.*, there is a pressure under which there is no flow, though this force is very small.

The results above show clearly the behavior of rubber. Under small pressures and up to a certain value of flow the latter is a linear function of the pressure. Above these pressures, a deviation appears, which increases up to a point where the linear function is transformed into one involving the square of the pressure. In addition it often happens that there is a deviation even from this form in the direction of a still more rapid increase in the flow relative to the pressure.

The transition from the law of Poiseuille to that of the squares is such that the smaller the mobility of the material the sooner it appears. Thus for the materials described in the preceding article it was not possible to verify the law of Poiseuille with the facilities available, because of the small flow which would have been necessary to measure. Nevertheless it was shown that the law of squares probably would not be valid for the lowest pressures, since extrapolation gives the absurd result of a flow under no pressure. What has now been shown will account perfectly for this apparent absurdity.

Rubber has Unknown Property

It does not seem possible to attribute this peculiar behavior of rubber, whether pure or diluted with other substances, to the same disturbing causes already encountered with other plastic materials. In fact in the latter case these causes are active at the lowest pressures and disappear at high pressures, whereas in the present instance the exact opposite occurs. On the other hand, the telescopic nature of the motion during the flow of rubber has been shown[1] even in the case where this flow is from an orifice of a small size. In the case of the glass tube with which these determinations were made it was easy to obtain an idea of the nature of the motion. The materials adopted were generally transparent and not too pure to show many particles of small size. Observing the current within the glass tube there was apparent a differential flow of the particles, some moving at a very slow velocity, while others had a much greater velocity, particularly along a central axis. In short, it appeared in effect that the motion involved a flowing of concentric strata, the motion being little or nothing close to the walls and very rapid at the axis. No difference of behavior was apparent between castor oil and a mixture of rubber and mineral oil, not even with the latter

(*Continued on Page* 106)

Translated by C. C. Davis from *Rendiconti della Reale Accademia Nazionale dei Lincei*, Vol. II, series 6a, Part 2, no. 5-6, Sept. 1925.

VULCANIZATION & ACCELERATORS

By Andre Dubosc

PART II (*CONTINUED*)

Natural and Mineral Accelerators

Tests Made by Stevens Showed that the Rapidity of Vulcanization of Matured Crepe Rubber is Due to the Presence of Organic Bases Formed During Putrefaction of Serums Retained in this Rubber

*[In the last installment, M. Dubosc gave an account of experiments made by Stevens with a number of samples to determine the catalytic action of derivatives which result through the decomposition of nitrogenous matters in rubber. The discussion of the results of these experiments is continued here—*THE EDITOR.]

1. The best results in vulcanization are obtained with the use of the accelerator, accelerene. Within one hour's vulcanization this accelerator gives a degree of vulcanization, greater than that obtained with the control sample, even after it has been vulcanized for three hours.

2. The samples of rubber gum, which contain natural accelerators, extracted from the rubber serum, that is samples Nos. 5 and 7, show an increase in the degree of vulcanization, but this increase does not bear any definite relationship to the content of the active principle in the rubber gum. One characteristic of these natural accelerators is that they appear to be more active when present in small quantities than when found in large masses. Thus sample No. 7, which contains four times as much of these natural bases as No. 5, but the accelerating effect is only twice as great.

3. It is to be noted that the coefficient of vulcanization and the physical characteristics of the vulcanizates, in the case of No. 7 approach very closely the coefficient and the characteristics pertaining to samples Nos. 2 and 3. Now sample No. 7 was a pale crepe rubber to which there had been added a natural accelerator, derived from the rubber serum, while samples Nos. 2 and 3 were made from matured crepe rubber, which had been charged with serum the protein matters of which had undergone decomposition. It therefore seems that the rapid vulcanization of the matured crepe rubbers is due to the presence of organic bases, which are formed during the progress of putrefaction. It therefore seems that the rapid vulcanization of the matured crepe rubbers is due to the presence of organic bases which are formed during the putrefaction process.

Further Conclusions

4. Sample No. 4 has a higher coefficient of vulcanization and vulcanizes at a higher rate of speed than control sample No. 10. This sample contains one half of one per cent of evaporated serum, which contains only a small proportion of organic bases. The rubber sample, which contains 1.5 per cent of the evaporated serum gives almost the same results as are obtained with the sample that contained 0.4 per cent of the natural accelerator.

5. Sample No. 6 showed that the natural accelerating bases, which are converted into the phospho-tungstic derivatives, behave in a manner almost the same as that when they are present in the free state.

The examination of the physical characteristics of the various vulcanized rubbers obtained in this series of experiments lead to the identical conclusions derived from a study of the coefficients of vulcanization.

The organic bases which have formed the subject matter of this series of investigations are not at all volatile, or they are only slightly volatile. Often during the progress of the putrefaction of the serum there are formed substances which are volatile and which can be isolated by distillation in a current of steam. These experiments may be carried out on fragments of matured crepe rubber.

In fine, the tests which Stevens made on this subject showed that the rapidity of the vulcanization of matured crepe rubbers, whose preparation was described by Eaton, is due to the presence of organic bases formed during the putrefaction of the portions of serum retained by these matured rubbers. The quantities of these substances which can be extracted from the matured crepe rubbers is often quite considerable, while in the case of a pale crepe rubber there is scarcely enough of these materials present to give any extract at all. At times just traces are obtained in the process. These substances are also met in the residual serum obtained after coagulation of the rubber latex, but here again the proportion present is very small. As these substances have a very potent action on the vulcanization of the rubber molecule, it is perfectly proper to consider them as natural accelerators of vulcanization.

Views of Other Rubber Chemists

The various observations made by Stevens on this subject and described above are in good accord with those made by Eaton and Grantham, who, as early as 1916, decribed the role that is played by organic bases in vulcanization—bases are derived from the decomposition of the natural proteins in rubber or from substances which are in the state of solution in the rubber serum. All these views agree with those held by Spence.

In November 1916, Eaton published the opinion that one of the active organic bases might well be putrscine or tetramethylenediamine. He said that the biological formation can be facilitated by heating the matured rubber gum at a temperature of 120 degrees C.

This would tend to explain the influence of the preliminary heating of the rubber gum before it was put through the vulcanization process. The treatment of the gum in this manner was first carried out in the Delft laboratories.

Van Hairn Studies

A study which Van Hairn made on this subject—if we adopt this special viewpoint of the effect of the preliminary heating of the rubber gum before vulcanization—does not lack interest, and it therefore appears to us that it would be worth while summarizing the results obtained from this series of investigation as follows.

What Van Hairn did was to heat various samples of crepe rubber for different periods of time, which varied from four to eight hours, in an atmosphere of carbon dioxide, in such a manner that oxidation of the rubber was avoided. Then the

samples of rubber were vulcanized and afterwards analyzed. The following were the results obtained from the analysis:

	BREAKING LOAD IN KILOGRAMS PER SQUARE MILLIMETER	PER CENT ELONGATION	COEFFICIENT OF VULCANIZATION
Crepe rubber, Hevea	83	916	2.83
Crepe Hevea rubber, heated four hours at 130 degrees C	136	863	4.15
Crepe Hevea rubber, heated eight hours at 130 degrees C	95	842	3.61

When the heating period lasted four hours the results obtained seemed to indicate that the maximum heating period was reached. For when the heating was prolonged, not only the physical characteristics of the vulcanized rubber samples but the coefficient of vulcanization as well were lowered.

When the heating was conducted for one hour at a temperature of 80 degrees C the quality of the rubber appeared to have been improved, as such a rubber gum vulcanizes completely within a period of one and one half hours in place of the usual three hours. On the other hand the physical characteristics of the products did not appear to be modified to any great degree.

Heating in Presence of Air

When the various samples of gums were subjected to the same degree of heating in the presence of air, the vulcanized state appeared to be improved to some extent, but then the rubber was quite appreciably oxidized.

The effect of heating was noticed in the rubbers prepared by the Kerbosch method which consists in evaporating the rubber latex. The gums obtained in this manner were much superior to those that were made in the usual way.

It thus appears evident that this happy modification in treatment—that is the increase in the mechanical resistance of the vulcanized rubber as well as the diminution in the time that it takes to vulcanize the rubber—is due to the formation of natural accelerators identical to those whose action has been studied by Eaton, Stevens and Spence. These substances are formed under the influence of heat which has the result of facilitating the biological action of ferments on the proteins and other nitrogenous substances found in the original raw rubber.

Stevens has announced that he carried out a study on natural accelerators, with the idea of determining the nature of the substances which can be formed in the biological decomposition of protein matters and nitrogeneous substances contained in the original raw rubber. But to our knowledge, he has not published anything on this subject.

The question of the insoluble matters in rubber fail to interest the Delft laboratories and at these laboratories there have been undertaken a series of investigations on all these points which relate to rubber and to the uses that are made of it.

Dekker, working in these laboratories, found that the methods generally employed by rubber chemists and investigators did not yield results which were absolutely accurate. The reasons which may be ascribed for this are as follows:—

1. A part of the protein matters are dissolved in the benzine or in the xylene.

2. The insoluble matter, determined with the aid of methods which have been used for this purpose up to the present time, contains non-dissolved rubber. The latter introduces an error into the determination, and this error can also be due, as well as that which has been already indicated by Beadle and Stevens, to the colloidal protection exercised on the rubber in solutions of the gum.

Dekker succeeded in removing this error by working at elevated temperatures which results in depolymerization, and in using petroleum as the solvent at a temperature of 260 degrees C at which point the liquid is boiling.

In applying the method developed by Dekker, the rubber gum was heated before being dissolved in the petroleum, and it is stated that the percentages of insoluble matter and proteins are much greater than those which have been found by the methods which have been used up to the present time.

When the duration of the heating is varied from one half hour to three hours the percentage of insoluble matter in the rubber is increased from 7.7 per cent to 11.3 per cent, and the percentage of the protein matter from 2.84 percent to 3.20 per cent.

The prolongation of the heating above one and one half hours has a tendency to reduce the proportion of protein matters in the rubber. This is very probably due to the decomposition of these substances and the formation of volatile bases.

Van Rossem investigated the relation that might exist between the percentage of nitrogen in crude rubber and the coefficient of vulcanization of the gum. At the end of 134 tests carried out on plantation rubbers, he found that this relationship might be expressed according to the following formula:—

$$r = -0.054 - 0.058$$

It seems to be indicated that the nitrogen content in a rubber gum has only a very slight effect on the coefficient of vulcanization.

Although it may appear that it is said in contradiction of the results obtained in the preceeding studies, nevertheless there is a certain amount of truth in the assertions made by Van Rossem. It is not the total percentage of nitrogen that plays the important role in vulcanization, but rather the percentage of nitrogen that corresponds to the amine bases, which are brought about by the biological decomposition of the protein matters and of the other nitrogeneous substances contained in the rubber gum.

Activated Vulcanization

In the exposition which precedes we have sought to establish the influence that might be exerted by various foreign matters on vulcanization, referring particularly to such substances as resins and protein matters, which had been considered for a long time in the past as materials which had a decidedly bad effect on the qualities of the rubber. We endeavored to demonstrate that in their absence, the rubber gum can be vulcanized with great difficulty only and at times is altogether unvulcanizable. We have finally attempted to prove that it is possible to extract from these substances, when they are subjected to the proper kind of treatment, certain other substances which are able to increase the rate at which the vulcanization takes place and which are also able to improve the qualities of the vulcanized product.

This discussion therefore constitutes the first part of what might be called "Activated vulcanization of rubber."

Before the very highly scientific experiments and the extremely complex researches were undertaken, while the use of rubber was becoming industrial, one of the chief occupations of the superintendents of rubber mills was to make vulcanization as rapid a process as possible.

Modifying Vulcanization

The process of vulcanization can be modified in various ways by different factors which have been very clearly described in the paper entitled "Experiments on the Processes of Vulcanization" by Van Rossem.

The plastification and the preliminary heating of the rubber, the duration of the vulcanization and the temperature at which it is carried out, the viscosity of the rubber, the quantity of sulphur mixed with it, the character of the loading and coloring materials employed, whether they are organic or inorganic in origin, can all have an important effect on the coefficient of vulcanization and on the properties and the physical constants of the vulcanized product. They can exert just as important an action as the insoluble matters which are natural to the gum, the proteins, the resins and the accelerators employed to quicken vulcanization.

Certain of these factors have only a relative action on the rubber and vulcanization. On the other hand, there are others which have a very marked effect and these were the ones employed by practical rubber men to aid in vulcanization before the introduction of the accelerators.

[Another installment of the Dubosc Series will be published in an early issue—The Editor.]

EDITOR'S REVIEW DESK

Books **Trade Catalogs** **Articles**

RECREATION AND WORK SHOES. 32 pp. 5 x 7¾". Issued by the La Crosse Rubber Mills Co., La Crosse, Wis.

Styles selected by the company for the 1925-1926 season form the contents of this catalog. Outing and gymnasium and sport types predominate in men's, women's, youth's and children's makes and sizes.

• • •

MANAGEMENT METHODS. No. 6. Present-Day Merchandising. 17 pp. 3⅛" x 6". Issued by Metropolitan Life Insurance Co., New York City.

Various theories of merchandising in vogue in department stores and allied enterprises are tabulated and discussed in this booklet. Among innovations advocated are the "open to buy" idea and the perpetual inventory card. A sample classification sheet is also inserted.

• • •

IXL CONTINUOUS TOOTH HERRINGBONE SPEED REDUCERS. Issued by Foote Bros. Gear & Machine Co., Chicago, Ill.

Advantages of speed reducers having continuous generated teeth with 30 degrees helix angle are given as eightfold in this leaflet, which describes three styles of noiseless, compact units manufactured by the company. A list of sixteen uses to which this product can be put is included.

• • •

THE TAYLOR STOKER. Bound in black and stamped in red. Mailed in black envelope. 64 pp. 8⅝ x 11¼". American Engineering Co., Philadelphia, Pa.

The artistic arrangement and printing of this catalog is an achievement. Illustrations on every point that might help the executive interested in understanding the stoker are given with explanatory notes at length. Among the companies given as using the Taylor Stoker are the Firestone Tire & Rubber Co., Akron, and the Goodyear Tire & Rubber Company, New Toronto, Canada.

• • •

RUBBER AND MR. HOOVER. Published in *The Nation*, January 20.

The Stevenson Restriction Scheme, so long a target for American criticism and the object of so much adverse discussion among industries dependent upon rubber for manufacturing needs, is here given the benefit of the doubt and cautiously defended as "one small step in the direction of common sense." The writer sees in the measure the only possible step Great Britain could have taken to save half the rubber plantations in the East Indies from elimination in 1921. After this debacle, as demand increased, the survivors would have reaped tremendous profits, and the work of years would have had to be attempted over again.

Admission is made that the plan overreached itself in its excessive restriction of output but Mr. Hoover's attack upon foreign monopoly of the rubber output is treated flippantly and the entire recent agitation against this domination viewed in the light of a tempest in a teacup.

• • •

THE ABSORPTION OF WATER BY RUBBER. By C. R. Boggs and J. T. Blake of the Simplex Wire & Cable Co., Boston, Mass. Published in the March issue of *Industrial & Engineering Chemistry*.

Vulcanized rubber compounds absorb water, sometimes to the extent of 500 per cent. Water vitally affects the electrical properties of the compound. Thus far, attempts to reduce absorption materially by variations in the compounding have proved unsuccessful; the property of absorption is inherent in the rubber itself. There is no satisfactory mathematical interpretation of the rate of absorption.

Absorption of water is similar to the swelling of rubber in organic solvents. The water is probably first absorbed in the surface layer, then slowly diffused into the mass, followed by a more or less complete dispersion of the rubber. It has been determined that a number of latex coagulants affect the rate of absorption. Factors, such as pressure, temperature, surface tension and the effect of air have also been investigated. According to the authors, temperature seems to play the most important part in absorption.

Absorption is largely due to the nonrubber-hydrocarbon constituents of the crude rubber. Purified rubber hydrocarbon absorbs a comparatively small amount of water. Methods of partially purifying the rubber by washing, by coagulating latex so as to lower the protein content, and by chemical means have been studied. It is believed that synthetic rubber has a much lower rate of absorption than natural rubber.

• • •

REPORT ON LONGEVITY OF HEVEA BRASILIENSIS. By F. G. Spring. Published in the *Malayan Agricultural Journal* for January.

Because of the comparative youth of the rubber plantation industry, it is not possible to say at this time what the life span of hevea may be or to give accurately the period over which a group of rubber trees will continue to yield a supply of latex. Three factors entering into this duration problem are disease, soil erosion and bark renewal. In areas which have been severely thinned out the problem is replanting, requiring special supervision in order to maintain the number of trees, per acre, at a reasonable standard. Impoverished soils are not productive of healthy trees and precautions must be taken to reduce soil erosion to a minimum.

An inspection of some of the oldest trees in Ceylon showed that after 30 years bark renewal is very slow and the power of recuperation is much less than with younger trees. Practically all old trees have been severely tapped in the past and it is likely that better cultivation of estates, conservation of the surface soil, conservative systems of tapping and good quality tapping will result in a longer period of increased yields.

The Law of Poiseuille

(*Continued from Page* 103)

mixture at low pressures where the law of Poiseuille was valid, nor at high pressures where the law of squares applied.

It must be assumed then that *rubber, either pure or diluted with other materials, has a property still unknown among other substances*, that is, *its mobility must not be a constant, but a function of the velocity of flow.* The experimental results indicate that the mobility at first remains constant, as with other materials, then increases to a value where it becomes proportional to the square root of the velocity and this value does not change over a wide range. Eventually it tends to increase still more rapidly.

It might have been expected that the variations in the mobility would have been more nearly continuous so that both the law of Poiseuille and that of the squares would have been valid only in an approximate way for any particular range of pressure. Nevertheless it must be remembered that at least the law of squares has been verified in the case of some materials over very extensive ranges without any indication of systematic deviations within the limit of experimental errors.

BIBLIOGRAPHY

[1]) *Atti della Reale Accademia Nazionale dei Lincei* Vol. 32 5a 399-402 (1923).
Rubber Age 15, 454-5 (1925).
Chem. Abstracts 18, 3738 (1924).

[2]) *Giornale di Chimica Industriale ed Applicata* Vol. 6 277-279 (1924).
Rubber Age 16, 372 (1925).
Chem. Abstracts 18, 3737 (1924).

[3]) *Giornale di Chimica Industriale ed Applicata* Vol 6, 567-570 (1924).
Rubber Age 16, 306-7 (1925).
Chem. Abstracts 19, 2281 (1925).

The Market Place

WHERE TO OBTAIN

Machinery, fabrics, chemicals, compounding ingredients, crude and reclaimed rubber, consulting chemical

1.

ACCELERATORS—X L O and Diphenyl Guanidine.

Dovan Chemical Corp.

30 Church St. New York

ACCELERATORS — Two new accelerators: Vulcone and Di-ortho-tolylguanidine.

E. I. du Pont de Nemours & Co., Inc.

Dyestuffs Dept. Sales Div.

Wilmington, Del.

ACCELERATORS

Grasselerator 102
Grasselerator 552
Grasselerator 808

Grasselli Chemical Co.

Rubber Service Dept.

347 Madison Ave., New York

ACCELERATORS— Every lot is tested before shipment and a written guarantee of quality furnished.

Roessler & Hasslacher Chem. Co.

709 Sixth Ave. N. Y. City

ACCELERATORS—A19, A7, Thiocarbanilid.

The RUBBER SERVICE Laboratories Co.

611 Peoples Savings & Trust Bldg.
Akron Ohio

ANTIMONY Pentasulphide, golden and crimson, very fine, pure.

Rare Metal Products Co.

Belleville, N. J.

Direct Factory Representation

ASBESTINE—Specially prepared for use in Rubber. Send for liberal working sample.

SOLE PRODUCERS

International Pulp Co.

41 Park Row, New York City

The* BLUE LIST *of the Industry

Your Products Listed Here

reach buyers in rubber factories at a cost lower than is possible by any other method.

ARRANGE FOR YOUR LISTING TODAY!

BEAD CABLES— National Flat Woven and Pratt Patent Bead Cables.

National Standard Co.

Niles, Mich.

BOLTON BIAS CUTTER

Cuts cord or flat woven fabrics with equal ease and precision. In use all over the world.

Spadone Machine Co., Inc.

15 Park Row New York

CALENDERS—Embossing, for artificial leather, oil cloth etc.

Textile-Finishing Machinery Co.

83 Exchange Place, Providence, R. I.

CARBON BLACK—*Micronex* the world's standard gas black, universally known as the "King of Rubber Pigments."

Binney & Smith Co.

41 East 42nd St. New York City

CARBON BLACK

Godfrey L. Cabot, Inc.

Manufacturers for forty years.

940 Old South Bldg., Boston, Mass.
612 Metropolitan Bldg., Akron, O.

CARBON BLACK—*Aerfloted* Arrow Black for rubber compounding. Standard for grit-free uniformity.

J. M. Huber, Inc.

130 West 42nd St. New York

CARBON BLACK — *Black Goose Brand*—free from grit and impurities and imparts high tensile strength to the rubber compound.

Union Power Co., Inc.

310 United Bldg., Akron, Ohio. 607 Com'l. Nat'l. Bank Bldg., Shreveport, La. 25 West 43rd St., New York, N. Y.

CARBON BLACK or any other compounding material used by rubber manufacturers can be marketed at low cost by listing it in *The Market Place.*

CASES—Fibre construction, insure satisfactory shipping results. Send for sample.

Brooklyn Fibre Syndicate, Inc.

Decatur St. & Irving Ave.
Brooklyn, N. Y.

CATALPO — The universal and standard rubber pigment now being used in treads, solids, tubes, carcass, frictions, etc.

Moore & Munger

33 Rector Street
New York City

CHEMISTS read your listing in the MARKET PLACE. There is no cheaper way to reach these prospects.

Try It!

THE MARKET PLACE Section Continued on Second Page Following.

MARKETS

Cottons and Fabrics

NEW YORK, April 30, 1926

Two weeks ago the outstanding feature of cotton news was the continuance of unfavorable weather conditions throughout most of the belt. With the exception of Alabama, South Carolina and parts of Georgia where the precipitation was not sufficient to prevent planting, farming activities were further delayed. Yet old crop months were relatively stronger than distant positions, a development which was explained by some brokers as the result of several conditions.

Among these conditions, the existence of a concentrated long interest in the near position, the continued absence of selling pressure on the part of southern holders and the extensive amount of cotton sold to domestic and foreign spinners based on May were stressed. Of slightly less importance, was the nature of the outstanding short interest which was scattered, and built up largely by speculative sales made earlier in the season.

The weather continued to be a factor in the market during the last few days. But although virtually no rain occurred in the belt during a period of three days, a further slight decline occurred on the 29th and the quantity of May buying orders at each point recession furnished a degree of resistance that caused recovery later.

Reports that important tire manufacturers had completed negotiations for fabric mills in the South aroused great interest until they were subsequently denied, but the fact that enormous orders for tire fabrics had been placed with Georgia cotton mills was confirmed. Cables from London carried the information that Lancashire mills using American cotton would close down for a week following recommendations adopted recently. It was estimated that about 20,000,000 were involved.

New York Prices

	Open	High	Low	Close	Close April 15
May	18.57	18.71	18.56	18.62	18.82
July	18.12	18.28	18.11	18.16	18.38
October	17.22	17.38	17.20	17.28	17.40
December	16.83	17.04	16.85	16.95	17.06
January	16.78	16.95	16.78	16.87	16.98

TIRE FABRICS

In a few cases rubber manufacturers recently requested a resumption of deferred fabric shipments, because requirements had been amply provided for in the second quarter. This was indicated by the limited quantity of new business placed. Several small manufacturers were in the market for small quantities, but these accounts were not considered favorably in some quarters.

During the past few days a number of important inquiries were reported in the market. A rumor that tire prices might be cut was heard in the market, but given little credulence. A true price basis for tire fabrics was said to be impossible because business was so limited. Some lots of 23s 5-3 ply sold at 46 cents, with mills quoting on inquiry up to 47 cents.

Readjustments in quality of tire fabrics are constantly being made, it was said. For instance, cord fabrics for low pressure tires were reported being manufactured from low Sak. cotton, and some mills were said to be substituting combed uppers for carded Saks. Another development was said to be the manufacture of fabrics of 23x3x4 instead of 23x3x5, thus using 12 plies instead of 15, and resulting in saving one-fifth of the cotton consumed.

CORD FABRICS

Combed Sakellarides	lb.	.65	@	—
Combed Peeler	lb.	.50	@	—
Carded Peeler		.45	@	.46
Combed Egyptian uppers	lb.	.62	@	—
Carded Egyptian uppers	lb.	.55	@	.56

SQUARE WOVEN

17½-ounce Egyptian uppers, combed	lb.	Nominal		
17½-ounce Egyptian uppers, carded	lb.	.53	@	.55
17½-ounce Sakellarides, combed	lb.	Nominal		
17½-ounce Peeler, carded	lb.	.43	@	—

Ducks—Cotton duck trading has continued along previous limited trading lines. Spot orders were placed in various quarters, but the total sales volume was said to be disappointing to a few producers of cotton duck. Buyers disposed to place large orders were given the opportunity to shade asking prices on a number of constructions. In one quarter it was stated that purchases out of stock were being refused when offered on the same basis as five-week future deliveries; it was said that this mill insisted on a good profit for quick deliveries.

Burlaps—Unsettled conditions in Calcutta have featured the burlap market recently. Cable advices carried conflicting reports; one stated that shipments had been resumed, but another reported unofficially that the market there remained virtually closed. It was understood that the difficulties in Calcutta were not entirely due to wage questions, as five mills figured prominently in the reports.

SHEETINGS

40-inch	2.50-yard	yd.	.13½	@	—
40-inch	2.85-yard	yd.	.11⅞	@	.12
40-inch	3.15-yard	yd.	.13	@	.13¼
40-inch	3.60-yard	yd.	.10½	@	.10⅝
40-inch	3.75-yard	yd.	.09½	@	—
40-inch	4.25-yard	yd.	.08¼	@	—

DUCKS

Belting	lb.	.36	@	.38
Hose	lb.	.36	@	.38
Enameling	lb.	.38	@	.43
Shoe Ducks	lb.	.40	@	—
Single filling	lb.	.15	@	.18
Double filling	lb.	.18½	@	.20

BURLAPS
(Carload Lots)

7½-ounce 40-inch	6.70	@	6.75	
8 -ounce 40-inch	6.90	@	6.95	
10 -ounce 40-inch	9.20	@	9.25	
10½-ounce 40-inch	9.30	@	9.35	

J. H. LANE & CO.

Tire Fabrics Cord Fabrics

Enameling Duck Drill Sheeting

Osnaburg and Special Constructions

250 W. 57 Street, NEW YORK 323 South Franklin St., CHICAGO

ALL THE LEADERS

Are represented in this section. Purchasing agents can rely on the concerns listed as thoroughly reliable in every way.

The Market Place 2.

RUBBER FACTORIES

use vast quantities of raw materials and equipment. Let the industry know how well you can serve it through a listing in this section.

CONSULT BANNER

Before You Buy
TIRE BUILDING MACHINES

The Banner Machine Co.
Columbiana, Ohio
Paul A. Frank, Akron, Ohio, Agent.

DO YOU KNOW

how cheaply space in this section may be obtained?

Write for Rates

CHEMICALLY PURE BRIGHT RED OXIDES

Unsurpassed for fineness, strength and uniformity.

J. H. Nicholas & Co., Inc.
109 Liberty Street, New York City.

CRUDE RUBBER — All Grades.

Washed - Dried - Milled.
Send us Your Inquiries.

Gibraltar Rubber Corp.
West New York, N. J.

FABRICS

—Tire fabrics, Egyptian—Peeler, Karded and Combed, Cord and Square.

Cabarrus Cotton Mills
(Cannon Mills, Inc.)
55 Worth St. New York
327 S. La Salle St. Chicago

CHEMICAL MNFRS.

Over 30 chemical firms are using *The Market Place* regularly. The cost is moderate and results sure!

The Rubber Age
225 Fourth Ave., New York

DIPHENYLGUANIDINE

Aero Brand, product of the highest purity from dependable source of supply.

American Cyanamid Co.
511 Fifth Ave. New York City.

FABRICS

—Spots and Contracts: Tire Fabrics, Enameling ducks, Tube Wrapping Tapes.

H. Frank Jones
395 Broadway New York City

CHEMICALS

and compounding ingredients for the rubber trade.

Harshaw, Fuller & Goodwin Co.
Cleveland, Ohio

DRY KILN

—for drying crude rubber and chemicals—Hunter Process.

Carrier Engineering Corporation
750 Frelinghuysen Ave. Newark, N. J.

FABRICS

—Tire, cords, enameling ducks, drills, sheetings, osnaburgs.

J. H. Lane & Co.
250 West 57th St. New York City

CHEMICALS

— Accelerators
Trimene Base, Heptene, Monex, Crylene, Lithex, Thiocarbanilide, Aniline Oil.
Clay—Mineral Flour, Seminole (Georgia).
Antioxidant—VGB, a proven product.
Labels—all-rubber two color brands.

Naugatuck Chemical Co.
1790 Broadway, New York.

ENGINEERS

Machinists, Iron and Steel Founders
Standard and Special
Rubber Working Machinery
The Adamson Machine Co.
Akron, Ohio

FABRICS

—Tire fabrics—coarse builders, chafers, breakers in all grades.

New England Southern Mills
LAWRENCE & CO.
24 Thomas St. New York
Boston, Philadelphia, Chicago, St. Louis, San Francisco

CHEMICALS

and compounding ingredients; Clay, Whiting, Accelerators, Mineral Rubber.

R. T. Vanderbilt Co.
50 East 42nd St. New York City

LISTING IN THIS SECTION

Places your products among the leaders in the field!

THE RUBBER AGE
225 Fourth Ave., New York

FABRICS

—Stockinets, Jersey Cloth and Special Fabrics for the Rubber Industry.

U. S. Knitting Co., Inc.
Pawtucket, R. I.

CHEMICALS

and pigments for the rubber trade. Complete stocks.

Wishnick-Tumpeer Chemical Co.
CHICAGO CLEVELAND BROOKLYN

FACTICE

—Prevents blooming, makes colors fast and a smoother batch.

Stamford Rubber Supply Co.
Stamford, Conn.

THE MARKET PLACE Section Continued on Second Page Following.

Crude Rubber

NEW YORK, April 30, 1926

Following a flurry of selling in London which drove prices down, the market both there and in New York reacted on the 16th in a session featured by few sellers. Factory interest was confined to narrow limits during the next few days, but a fair volume of business was done on the Rubber Exchange. The stock increase in London caused a decline and dullness on the 19th but activity on the Exchange was of such a character that the market steadily advanced.

An irregular trend in prices marked the 20th. Outside of the Exchange, little was done. Factory interest was not attracted by price levels, as there was enough speculative support in New York and enough steadiness in London to prevent a break. The market opened the next day at higher levels, but the strength did not last long, due to lack of interest. Short covering on the Exchange and some inquiry from outside resulted in a firmer market on the 22nd when trading set a new high record, with 466 lots changing hands. Short covering operations broke out in force late in the day and prices reached the highest levels just before the close.

With shorts fairly well covered, prices were easier, on the 23rd. Early reports said that factories were showing a little more interest and a few transactions were put through during the morning. This interest quickly subsided in the afternoon, and the next day was quiet but steady.

Opening strong on the 26th in sympathy with London, prices held for a while and then dropped back, as evidence that it is almost impossible to sustain the market without some interest. Dullness continued for the next two days, with few buyers in evidence either on the street or on the Exchange. Dealer interest was also limited. Trading was confined to a few parcels in nearby positions outside, and on the Exchange, buyers were not much in evidence at the prices at which sellers would do business. The trade was so uncertain over the new restriction reports that both buyers and sellers showed no inclination to operate actively.

Some factory support and plenty of bullish arguments, the strongest being the probability of further factory interest, resulted in higher prices on the 29th. It was said that with such support a rise to well above 50 cents was probable, but without it the current movements would peter out and prices return to their old levels.

After a fairly satisfactory day, rubber closed firm and unchanged today. The market was very firm at the opening, eased off around noon but the last hour found prices back to early levels. The firmness of the market in the face of an easier tone in London was regarded as a very favorable index to what might be expected in the near future.

NEW YORK MARKET

Plantations—			
Ribbed Smoked Sheets			
Spot	.48	@	.49
May	.48	@	.48½
June	.47	@	.48
July/Sept.	.46	@	.47
Oct./Dec.	—	@	.47
First Latex, crepe spot	.49	@	.50
Amber Crepe, No. 2, spot	—	@	.46
" " No. 3	—	@	.45
" " No. 4	—	@	.44
Brown Crepe, Rolled	—	@	.42½
" " Clean, thin	—	@	.43½
" " Specky	—	@	.41½
Pontianac—			
Bangermassin	Nominal		
Palembang	Nominal		
Prime Pressed	Nominal		
Sarawak	Nominal		
Paras—			
Upriver Fine	.40	@	.41
" Medium	.35	@	.37
" Coarse	.29	@	.30½
Acre Bolivian, fine	—	@	.40½
Tapajos, fine	—	@	.35½
Islands, fine	.36½	@	.37½
Cut Beni Bolivian, fine	—	@	.40
Caucho Ball—			
Upper, shipment	—	@	.29
Centrals—			
Corinto, scrap	—	@	33
Esmeraldo, sausage	—	@	.34
Guayule, w and d	.34	@	.38
Africans—			
Benguela, No. 2	Nominal		
Congo, upper, black	Nominal		
" " red	Nominal		
Kassai, Prime Red	Nominal		
Balata—			
Block Columbia	—	@	.65
" Cuidad	—	@	63
Surinam, sheet	—	@	.72
Gutta Percha—			
Sisik	—	@	.33
Red Macassar	—	@	$3.00
Chicle—			
Mexican, Yucatan	—	@	.58

LONDON MARKET

Standard Ribbed Smoked Sheets—

Spot	23¾d
May	23¾
July/Sept.	23¾
Oct./Dec.	23¾
Jan./March	24

SINGAPORE MARKET

Standard Ribbed Smoked Sheets—

Spot	22½d
May	22½
June	22½
July/Sept.	22⅝

Closing Prices on Rubber Exchange of New York, Inc.
APRIL 16 to 30

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec	Jan.	Feb.	March	SALES*
16	48.30[2]	46.90[4]	46.40[1]	46.10[4]	45.80[4]	45.60[4]	45.40[4]	45.20[2]	45.00[2]	44.50[3]	44.50[2]	318
17	47.00[2]	46.00[4]	45.10[1]	55.70[5]	44.50[3]	44.00[4]	43.80[4]	43.50[4]	43.30[4]	43.10[4]	43.00[2]	272
19	47.60[1]	47.40[4]	46.00[2]	45.80[4]	45.60[4]	45.50[4]	45.50[4]	45.50[4]	45.30[4]	45.00[4]	44.80[4]	280
20	47.70[2]	46.50[4]	45.60[1]	45.30[4]	45.00[2]	44.80[4]	44.70[4]	44.70[4]	44.50[4]	44.20[4]	44.00[4]	338
21	47.50[2]	46.00[4]	45.10[2]	44.50[3]	44.30[1]	44.20[4]	44.10[4]	44.00[4]	43.90[4]	43.80[4]	43.50[4]	259
22	48.60[1]	47.50[4]	46.90[2]	46.20[4]	45.60[3]	45.30[4]	45.20[4]	45.10[4]	45.00[3]	44.90[2]	44.80[4]	466
23	47.70[1]	46.50[4]	45.50[1]	45.30[4]	45.10[1]	44.90[4]	44.70[4]	44.50[4]	44.50[4]	44.30[4]	44.10[4]	233
24	48.20[1]	47.00[4]	46.50[1]	46.20[4]	45.80[3]	45.60[1]	45.60[4]	45.60[1]	45.30[4]	45.10[4]	45.00[3]	175
26	48.00[2]	46.70[4]	46.00[2]	45.60[4]	45.00[4]	45.30[4]	45.20[4]	45.20[1]	45.00[2]	45.00[3]	45.00[3]	432
27	47.70[1]	46.90[4]	46.20[2]	45.90[4]	45.70[4]	45.50[1]	45.30[4]	45.30[4]	45.10[4]	45.10[4]	45.10[4]	249
28	47.70[2]	46.80[4]	45.90[1]	45.60[4]	45.40[4]	45.30[4]	45.30[4]	45.30[4]	45.20[4]	45.20[4]	45.20[4]	199
29	48.50[1]	47.80[4]	47.20[1]	46.90[4]	45.80[3]	46.80[4]	46.80[4]	46.80[3]	46.60[4]	46.60[4]	46.60[4]	286
30	48.50[1]	47.70[4]	46.90[2]	46.60[4]	46.40[4]	46.30[4]	46.20[4]	46.20[4]	46.00[4]	46.00[4]	46.00[4]	365

([1]) trading ([2]) asking ([3]) bid ([4]) nominal (*) in lots of 2½ tons each

Reclaimed Rubber

NEW YORK, May 1, 1926

Reclaimers report a continuation of active demand for almost all grades, the only let-up being a seasonal one on shoe stocks. Tire and tube grades are very active, showing a resumption of heavy shipments. Steadiness of crude and scrap is reflected in reclaim prices, with the result that no changes in quotations are reported. Prices follow:

Friction (Uncured)				
No. 1	lb.	.40	@	.42
No. 2	lb.	.30	@	.32
High Tensile Black				
Super-Reclaim No. 1	lb.	.24	@	.25
" " No. 2	lb.	.18	@	.19
Shoe				
Unwashed	lb.	.10⅛	@	.10¾
Washed	lb.	.12¾	@	.13
Tube				
No. 1 (Floating)	lb.	.25	@	.26
No. 2 (Compounded)	lb.	.18	@	.19
Tires				
Black, unwashed	lb.	.10¾	@	.11
Black, washed	lb.	.12	@	.12¼
Black, selected tires	lb.	.12½	@	.12¾
Dark Gray	lb.	.14½	@	.15½
Light Gray	lb.	.16½	@	.17½
White	lb.	.19	@	.20
Truck, Heavy Gravity	lb.	.10	@	.10½
" Light Gravity	lb.	.10½	@	.11
Miscellaneous				
Mechanical Blends	lb.	.08	@	.09
Red, High Grade	lb.	.18	@	.19

Scrap Rubber

NEW YORK, May 1, 1926

After a period of dullness, scrap rubber is now showing a decided improvement with inquiries from reclaimers on an increase. Orders are being accepted on a firmer basis and several grades of scrap, especially white auto and inner tubes No. 1 are now quoted higher than at any time during April. Other grades remain unchanged. Prices follow:

Auto tire peelings		.01¼ @	.01⅝
Standard White auto	ton	47.50 @	50.00
Mixed auto	ton	24.00 @	25.00
Bicycle tires	ton	15.00 @	17.00
Clean solid truck tires	ton	37.00 @	40.00
Boots and shoes		.01¾ @	.02
Arctics, untrimmed		.01 @	.01⅛
Arctics, trimmed		.01¼ @	.01⅜
Inner tubes, No. 1		.09 @	.09¼
Inner tubes, No. 2, compounded		.07¼ @	.07½
Air Brake Hose	ton	22.00 @	23.00
Rubber hose	ton	15.00 @	17.00

The Market Place

3.

GUAYULE—"Duro" Brand washed and dried ready for compounding.

Continental Rubber Co.
120 Broadway New York

MOLDS
FOR TIRES, MECHANICAL GOODS & DRUGGIST SUNDRIES.
The Akron Rubber Mold & Machine Co.
AKRON, OHIO.

RECLAIMED RUBBER—for all purposes.

Rubber Regenerating Co.
Naugatuck, Conn.

LINERS — PROCESSED
For
Various Rubber Stocks
The Cleveland Liner & Mfg. Co.
5508 Maurice Ave., Cleveland, O.

MOLDS AND CORES—Tire building equipment; general machine work.

The Akron Equipment Co.
Akron, Ohio

RECLAIMED RUBBER
A standardized grade for every requirement.
U. S. Rubber Reclaiming Co., Inc.
100 E. 42nd St., New York, N. Y.
"43 Years Serving the Industry Solely as Reclaimers"

MACHINERY—
Heater Presses, Molds and Cores, Tubing Machines.
The Williams Foundry & Mach. Co.
"In Business Since 1888"
Akron, Ohio

MOLDS & CORES—Tire building machines; tire finishing stands; tubing machines; hydraulic presses.

The Akron Standard Mold Co.
Akron, Ohio

RECLAIMED RUBBER
The Xylos Rubber Co.
Akron, Ohio
CAPACITY 250,000 POUNDS DAILY

MANDRELS--CIRCULAR
and Economy Calender Shells
Prompt Service—Let us quote you.
The Clyde E. Lowe Co.
2976 E. 81st St., Cleveland, Ohio

MOLDS & CORES—for automobile tires; general machine work.

Kuhlke Machine Co.
Akron, Ohio

RED OXIDE—A special grinding, guaranteed uniform in color and quality.

Joseph A. McNulty
114 Liberty St. New York City

MICA — Water Ground and Water Floated — 160 Mesh —Absolutely Free from Grit. Akron Stocks, also Factory Shipments.

The C. P. Hall Co.
116 Central Savings & Trust Bldg., Akron

"NU-GUM" RUBBER
Produced from No. 1 Floating Tubes. Absolutely pure — no oils —no compound added. *Specific Gravity*, .98.
E. L. Bullock & Sons, Inc.
99 John St. New York City

RUBBER—Crude and scrap, all grades.

H. Muehlstein & Co.
Liggett Bldg. New York
Akron, Chicago, Boston, Hoboken

All the leaders in the rubber field

are now using the MARKET PLACE—

***That proves the value* of listings in this section.**

Arrange for yours now!

RECLAIMED RUBBER
We specialize in fine Grey, Black and Red Reclaimed Rubber.
Send us Your Inquiries
The Defiance Rubber Co.
Defiance, Ohio

RECLAIMED RUBBER—
Uniformity, reliability, cleanliness.

Pequanoc Rubber Co.
Butler, N. J.

YOUR NAME

in this space would be seen by Buyers, Chemists, Engineers and Executives in all rubber plants.

Write for full information

THE MARKET PLACE Section Continued on Second Page Following.

CHEMICALS & COMPOUNDING INGREDIENTS

Accelerators — Colors — M.R. — Compounding Ingredients
Softeners — Vulcanizing Ingredients — Rubber Substitutes

NEW YORK, May 3, 1926—Movements of chemicals and compounding materials during April did not come up to previous months of 1926, due largely to the poor weather which has prevailed over the country. Tire manufacturers have been forced to continue production on a fairly high scale but shipments to dealers have been below the average. With the advent of fine weather, however, things are looking much brighter and May is expected to see a return of normal shipments. Blacks, whites, fillers such as Catalpo, clays, accelerators are active with no price changes recorded. The market is firm and no large price quotations are expected. Prices follow:

ACCELERATORS

Organic			
Aledhyde ammonia, crystals	lb.	.82 @	—
Aniline oil, drums	lb.	.17 @	.17½
Crylene	lb.	.70 @	—
paste	lb.	.50 @	—
Di-Ortho-Tolylguanidine	lb.	1.05 @	1.08
Diphenylguanidine	lb.	.85 @	.88
Ethylidene aniline	lb.	.60 @	.65
Excellerex	lb.	.30 @	.35
Formaldehyde-Aniline	lb.	.40 @	.42½
Grasselerator 102	lb.	.80 @	.82
Grasselerator 552	lb.	4.80 @	5.00
Grasselerator 808	lb.	1.50 @	1.75
Heptene	lb.	.55 @	—
Hexamethylene-tetramine	lb.	.80 @	.82½
Monex	lb.	3.75 @	5.00
Paraphenylenediamine	lb.	1.25 @	1.30
Piperidine-Piperidyldithio-Carbamate	lb.	4.80 @	5.00
R & H 50	lb.	.60 @	—
Super-Sulphur No. 1	lb.	.50 @	—
Super-Sulphur No. 2	lb.	.18 @	—
Tensilac, No. 41	lb.	.65 @	—
Thiocarbanilide, kegs	lb.	.28½ @	—
Trimene	lb.	.75 @	—
base	lb.	1.20 @	1.35
Triphenylguanidine	lb.	.70 @	.73
Tuads	lb.	4.50 @	5.00
Vulcone	lb.	.75 @	.79
Zimate	lb.	5.00 @	—
Inorganic			
Lead, sublimed blue	lb	.10 @	.10½
Lead, white	lb.	.10¾ @	—
Litharge, domestic	lb.	.11¾ @	.12½
Magnesia, calcined,			
light	lb.	.10 @	—
extra light	lb.	.40 @	.45
heavy	lb.	.04½ @	.05

COLORS

Blacks			
Arrow "Aerfloted"	lb.	.08½ @	.13
Bone Black	lb.	.05½ @	.11
Carbon "	lb.	.09 @	.13
Drop "	lb.	.07½ @	.14
Ivory "	lb.	.12 @	.45
Lamp "	lb.	.12 @	.40
Micronex	lb.	.10 @	.14
Thermatomic carbon	lb.	.05 @	—
Blues			
Prussian	lb.	.32 @	.34
Ultramarine	lb.	.08 @	.35
Browns			
Sienna, Italian	lb.	.04 @	.14
Umber, Turkey	lb.	.04 @	.06
Greens			
Chrome, light	lb.	.28 @	.31
medium	lb.	.29 @	.32
dark	lb.	.31 @	.33
commercial	lb.	.07 @	.10
Chromium Oxide, bbl.	lb.	.30 @	.31
Reds			
Antimony			
crimson, 15/17	lb.	.27 @	—
sulphur free	lb.	.48 @	.50
vermillion 15/17	lb.	.37½ @	—
golden, 15/17 F.S.	lb.	.16 @	—
pentasulphide,			
pure,	lb.	.33 @	.35
15/17 F.S.	lb.	.26 @	.30
Indian English	lb.	.11 @	.15
Oximony	lb.	.13¼ @	—
Para toner	lb.	.80 @	.90
Red oxide, reduced	lb.	.11 @	—
pure	lb.	.12 @	.14
Blue Ridge	lb.	.12 @	.14
Toluidine toner	lb.	1.80 @	2.10
Venetian red	lb.	.01½ @	.05
Vermillion, quicksilver,			
English	lb.	1.40 @	1.45
Whites			
Albalith	lb.	.05⅞ @	.06⅛
Lithopone, Akcolith	lb.	.05⅞ @	.06
Lithopone, Azolith	lb.	.05⅝ @	.06⅛
Zinc Oxide—American Process			
XX red	lb.	.07½ @	.07¾
Kadox,			
black label, kegs	lb.	.10⅝ @	.11¼
blue " " "		.09⅝ @	.10⅛
red " " "		.08⅝ @	.09⅛
American Azo:			
ZZZ (lead free)	lb.	.07¼ @	.07¾
ZZ (under 5% lead-l)	lb.	.06⅞ @	.07⅜
Zinc Oxide—French Process			
White seal	lb.	.12⅜ @	—
Green seal	lb.	.11⅞ @	—
Red seal	lb.	.10⅜ @	—
Yellows			
Chrome	lb.	.17½ @	.18
Ocher, French medium	lb.	.03¼ @	.03⅝
domestic	lb.	.01¾ @	.02½

COMPOUNDING MATERIALS

Aluminum Flake			
(f.o.b. plant)	ton	21.85 @	24.50
hydrate light	lb.	.16 @	.17
Ammonia carbonate	lb.	.10 @	.10½
Are-O Sel	ton	8.00 @	11.00
Asbestine	ton	15.50 @	18.50
Barium carbonate	ton	54.00 @	55.00
Barium Dust	lb.	.05 @	.06
Barytes southern off-color, ton		12.00 @	18.00
Western prime white ton		23.00 @	—
imported	ton	27.00 @	34.00
Basofor	lb.	.04½ @	—
Blanc fixe dry f.o.b. works	lb.	.03¾ @	.04
Carrara filler	lb.	.01¾ @	.02
Catalpo (fact.)	lb.	.02 @	—
Chalk	lb.	.02½ @	.04½
Clay, China, domestic	ton	15.00 @	25.00
Aerfloted Suprex	ton	20.00 @	30.00
Blue Ridge, Dark	ton	9.00 @	—
" " Light	ton	12.00 @	—
Dixie	ton	20.00 @	35.00
Langford	ton	12.00 @	22.00
Mineral Flour,			
c. l. fob mine	ton	17.00 @	20.00
Seminole,			
c. l. fob mine	ton	16.00 @	—
Glues, extra white	lb.	.20 @	.29
medium white	lb.	.18 @	.24
common bone	lb.	.12 @	.14
Graphite flake, bbls.	lb.	.06½ @	.12
Magnesia, carbonate	lb.	.08 @	.09
Mica, powdered	ton	65.00 @	80.00
Rotten Stone (powdered)	lb.	.02½ @	.04½
Soapstone, powdered	ton	15.00 @	22.00
Starch, powdered	cwt.	3.81 @	—
Talc, domestic	ton	16.00 @	18.00
Terra Alba	cwt.	1.25 @	2.00
Tripoli, white	lb.	.02 @	.02¼
Whiting, commercial	cwt.	1.00 @	1.15
English cliffstone	cwt.	1.50 @	—
Quaker	ton	13.00 @	15.00
Superfine	ton	10.00 @	12.00
Sussex	ton	8.00 @	10.00
Wood pulp XXX	ton	35.00 @	—
" " X	ton	25.00 @	—

MINERAL RUBBER

Genasco (factory)	ton	50.00 @	52.00
Granulated M.R.	ton	33.00 @	—
Hydrocarbon, Hard	ton	29.00 @	—
Hydrocarbon, Soft	ton	29.00 @	—
320/340 M.P. hydrocarbon (c. l. factory)	ton	47.00 @	52.00
300/310 M.P. hydrocarbon (c. l. factory)	ton	42.00 @	47.00
Paradura	ton	70.00 @	72.50
Robertson, MR, solid	ton	35.00 @	75.00
M.R. (gran)	ton	42.00 @	80.00

SOFTENERS

Acids			
Muriatic, 20%	cwt.	.80 @	.90
Nitric, 36 degrees	cwt.	4.75 @	5.00
Sulphuric, 60 degrees	ton	10.00 @	11.00
66 degrees	ton	14.00 @	15.00
Tartaric, crystals	lb.	.29 @	—
Alkalies			
Caustic soda, 76%	cwt.	3.20 @	—
Soda ash, 58% C.L.	cwt.	1.43 @	1.45½
Oils			
Castor, No. 3 bbls.	lb.	.12¾ @	—
Corn, crude, bbls.	lb.	.11¼ @	—
refined	lb.	.13 @	—
Cottonseed, crude		.10½ @	—
Glycerine, C.P. drums	lb.	.23½ @	.24
Linseed, Raw C.L. bbl.	lb.	.09¾ @	—
Liquid Rubber	lb.	.12 @	—
Moldrite	lb.	.05 @	.06
Palm, Lagos	lb.	.08½ @	.08¾
Niger	lb.	.08⅛ @	.08¼
Peanut, domestic crude	lb.	.12½ @	—
Petrolatum, white	lb.	.11⅛ @	.11⅜
amber	lb.	.03⅜ @	.04
dark amber	lb.	.03⅜ @	.03¾
Pine, steam distilled	lb.	.60 @	.65
Rapeseed, refined	gal.	.84 @	.90
blown	gal.	1.00 @	—
Rosin, first rectified	gal.	.60 @	.62
second rectified	gal.	.65 @	.67
Soya Bean, crude		.13¼ @	.13½
Synthecite	lb.	.06 @	—
Tar, commercial	gal.	.30 @	.32
Resins and Pitches			
Tar Retort	bbl.	20.00 @	—
kiln burned	bbl.	20.00 @	—
Pitch, Burgundy	lb.	.06 @	.06½
coal tar	gal.	.05½ @	.06
pine	bbl.	8.00 @	9.50
Rosin, grade K	bbl.	15.25 @	—
Solvents			
Alcohol denatured,			
No. 1 bbls.	gal.	.34 @	.47
Benzol, 90%	gal.	.24 @	.29
pure		.24 @	—
Carbon bisulphide	lb.	.05½ @	.06¼
tetrachloride	lb.	.07 @	.08
Motor gasoline,			
steel bbls.	gal.	.22 @	.28
Naptha, V. M. & P.	gal.	.14¾ @	—
Turpentine, spirits	gal.	1.00 @	1.01
wood	gal.	.93 @	—
Waxes			
Beeswax	lb.	.62 @	.63
Carnauba, No. 1	lb.	.48 @	.49
Ceresin, white	lb.	.10 @	.11
Montan, crude	lb.	.06 @	.06½
Ozokerite, black	lb.	.24 @	.25
green	lb.	.26 @	.30
Paraffine White A.M.P.	lb.	.05¼ @	.05¼
Yellow A.M.P.	lb.	.05¼ @	.05¾

ANTI-OXIDANTS

VGB	lb.	.70 @	—
Antox	lb.	.88 @	—

SUBSTITUTES

Black	lb.	.08½ @	.14
White	lb.	.10 @	.17
Brown	lb.	.10 @	.15
Brown factice	lb.	.10 @	.16
White factice	lb.	.10½ @	.17½

VULCANIZING INGREDIENTS

Black hyposulphite	lb.	.18 @	.20
Ethyl Chloride, Cyl.	lb.	.55 @	—
" " Drums	lb.	.45 @	—
Sulphur Chloride (drums)	lb.	.04 @	—
Sulphur flour			
Superfine, bags	cwt.	2.20 @	2.50
" bbls.	cwt.	2.60 @	2.90
100% pure, refined,			
bags	cwt.	2.35 @	2.90
bbls.	cwt.	2.90 @	3.15